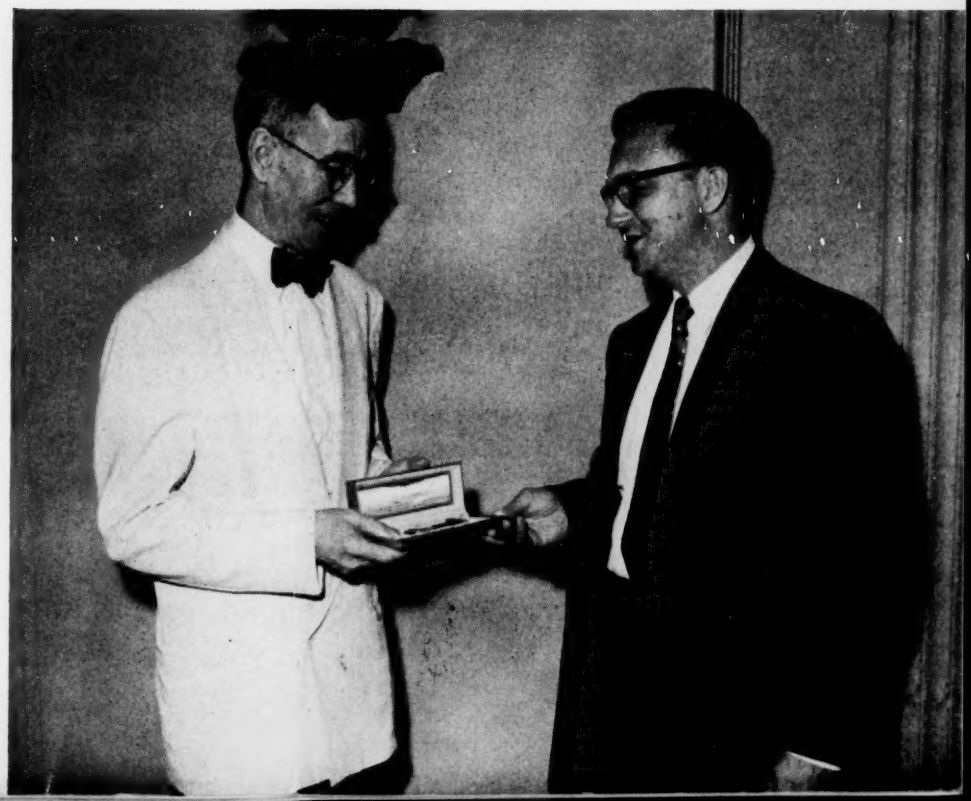
The Magazine for Executives

JUNE 20, 1953

American Leather Chemists' Golden Jubilee



Alsop Award Winner Dr. Henry Merrill (left) and Winheim Award Winner Dr. Seymour Kremen

CHEMICAL USERS' GUIDE To General Chemical Products for the Leather Industry

PRODUCT	AVAILABLE FORMS	COMMERCIAL STRENGTHS	SHIPPING CONTAINERS	APPLICATIONS
Sulfuric Acid H_2SO_4	Liquid	66° Be (93.19% H_2SO_4)	Carboys Steel Drums Tank Trucks Tank Transports Tank Cars	Pickling and plumping skins; deliming; tanning leather.
Hydrochloric Acid HCl + Water *(Muriatic Acid)*	Liquid	18° Be (27.92%) 20° Be (31.45%) 22° Be (35.21%)	Carboys Tank Trucks Tank Cars	Drenching skins; chrome tanning leather.
Oxalic Acid $C_2H_2O_4 \cdot 2H_2O$	Colorless Crystals	99.5% $C_2H_2O_4 \cdot 2H_2O$	Multiwall Paper Bags Fibre Drums	Bleaching leather.
Aqua Ammonia NH_4OH + Water *(Ammonia)*	Colorless Liquid	26° Be (29.4% NH_3)	Carboys Steel Drums	Neutralizer and detergent.
Ammonium Alum $Al_2(SO_4)_3 \cdot (NH_4)_2 \cdot SO_4 \cdot 24H_2O$	Crystals (Various sizes)	11.2% Al_2O_3	Multiwall Paper Bags Fibre Drums	Dyeing and tanning leather; treating fur.
Aluminum Sulfate $Al_2(SO_4)_3 \cdot 14H_2O$ Approx. *(Alum)*	Commercial & Iron Free Lump; Ground; Powder	17.25% Al_2O_3	Multiwall Paper Bags Fibre Drums Bulk Carloads	Tanning leather.
Potassium Alum $Al_2(SO_4)_3 \cdot K_2SO_4 \cdot 24H_2O$	Crystals (Various sizes)	10.7% Al_2O_3	Multiwall Paper Bags Fibre Drums	Dyeing and tanning leather; treating fur.
Sodium Bisulfite, Anhydrous $Na_2S_2O_5$ *(Sodium Metabisulfite)*	White Powder	97.5% $Na_2S_2O_5$ (Equiv. 65.5% SO_2)	Multiwall Paper Bags Fibre Drums	Soaking; deliming; chrome tanning leather.
Sodium Thiosulfate $Na_2S_2O_3 \cdot 5H_2O$ *(Hypo)*	Colorless Crystals	99.75% $Na_2S_2O_3 \cdot 5H_2O$	Multiwall Paper Bags Fibre Drums	Chrome tanning leather.
Sodium Fluoride NaF	White Powder	95% NaF 97% NaF	Multiwall Paper Bags Fibre Drums	Antiseptic.
Sodium Bifluoride $NaHF_2$	White Powder	95% NaF • HF 97% NaF • HF	Fibre Drums	Treating infected hides; bleaching leather.
Epsom Salt $MgSO_4 \cdot 7H_2O$	Colorless Crystals	99.5% $MgSO_4 \cdot 7H_2O$	Multiwall Paper Bags	Treating sole leather.
Sodium Silicate $Na_2O \cdot X(SiO_2)$ + Water *(Silicate of Soda)*	Liquid	38° to 52° Be Various ratios of Na_2O to SiO_2	Steel Drums Tank Trucks Tank Cars	Bleaching; adhesive.

The products advertised are commercial chemicals having various uses, some of which may be covered by patents, and the user must accept full responsibility for compliance therewith.

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LEATHER AND SHOES

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ABC

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Coming Events

June 23, 1953—Annual Golf Tournament sponsored by Shoe and Leather Club of Cincinnati. Clovernook Country Club, Cincinnati O.

Aug. 2-6, 1953—National Luggage and Leather Goods Show. Sponsored by Luggage and Leather Goods Manufacturers of America, Inc. Hotel New Yorker, New York City.

August 17-19, 1953—Allied Shoe Products and Style Exhibit. Hotel Belmont-Plaza, New York City.

August 18-19, 1953—Showing of American Leathers for Spring and Summer, 1954. Sponsored by Tanners' Council of America. Waldorf-Astoria, New York City.

Sept. 6-11, 1953—Annual Meeting, International Union of Leather Chemists Societies. Barcelona, Spain.

October 11-14, 1953 — Canadian Shoe & Leather Convention and Shoe Fair. Sponsored by shoe manufacturers, shoe suppliers and tanners. Mount Royal Hotel, Montreal.

Oct. 21, 1953—Annual Fall Meeting, National Hide Association. Edgewater Beach Hotel, Chicago, Ill.

October 22-23, 1953—Annual Fall Meeting of Tanners' Council of America, Edgewater Beach Hotel, Chicago.

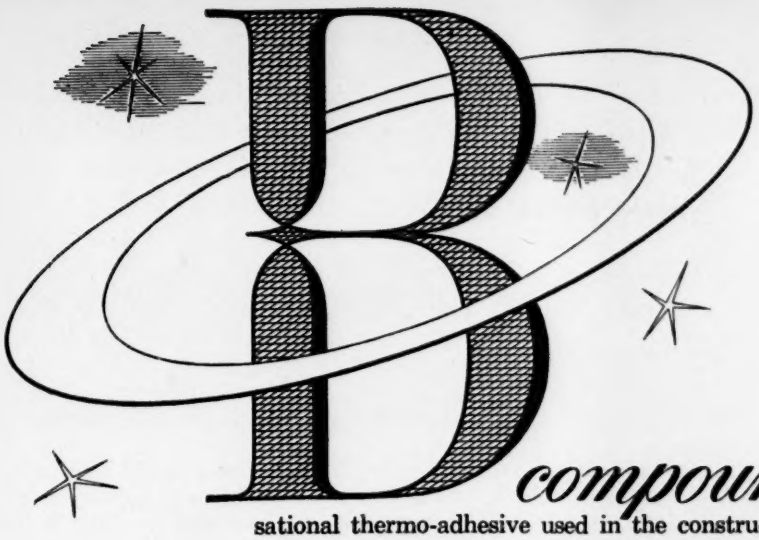
Oct. 26-29, 1953—National Shoe Fair, sponsored jointly by National Shoe Manufacturers Association and National Shoe Retailers Association at the Palmer House and other Chicago hotels.

Nov. 29-Dec. 3, 1953—Popular Price Shoe Show of America showing of footwear for Spring and Summer 1954. Sponsored by National Association of Shoe Chain Stores and New England Shoe and Leather Association. Hotels New Yorker and McAlpin, New York City.

Feb. 14-16, 1954—Factory Management Conference. Sponsored by National Shoe Manufacturers Association. Netherlands Plaza Hotel, Cincinnati, O.

March 1-2, 1954—Showing of American Leathers for Fall and Winter 1954. Sponsored by Tanners' Council of America. Waldorf-Astoria, New York City.

Oct. 28-30, 1954—Annual Fall Meeting of Tanners' Council of America. Edgewater Beach Hotel, Chicago.



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Beckwith **BOX TOES**

Leather chemistry is making major contributions —but failing to keep the industry informed about the practical applications of its researches. It should set up an

INDUSTRY INFORMATION SERVICE

THE American leather chemists have just completed 50 years of organization. Over this period, due to the research efforts of these chemists, many outstanding improvements have been made in the field of leathermaking. Producers of leather products are today able to work with better, more versatile leathers, and the public is receiving better values in the leather products it buys.

There's one big hitch, however, in this stupendous research effort being made by the nation's leather chemists. Their work and their major contributions to better leather and leather products are not being fully appreciated. And, unfortunately, it is largely their own fault.

It all boils down to something fundamental. You can't appreciate anything until you first have an understanding of the thing to be appreciated.

While the studies and research of leather chemists are understood and appreciated by other leather chemists and technicians, these works are usually so complex that their specific values and applications to the practical aspects of tanning — and especially to the leather consumer—become lost in a scientific maze.

Wants To Know

The comment of one major shoe manufacturer recently is typical: "I keep hearing about 'major advances' being made in leather research, especially in leather chemistry. Yet when I try to pin these down I find the practical answers always evading me. I want to know what these studies and researches mean to me and to the leather I'll be using in my shoes. The field of leather chemistry isn't keeping me informed—and as a result, I feel that it's neglecting a basic duty to me and the leather consumer in general."

This interested manufacturer has a potent point. He sees such erudite titles of technical papers as "The Accessibility of the Cationic Groups of Collagen to Anions of Poly Acids"; or "Amide Nitrogen of Collagen and Hide Powder"; or "Reactions of Vegetable-Tanned Leather with Higher Aldehydes and Organic Polymers."

While the manufacturer appreciates the professional necessity of the technical approach and title of a work presented to other leather chemists, he feels, and justifiably, that he ought to be kept informed as to the meaning of these works—their present or future practical application to his product.

Only One Purpose

It must be remembered that *all* research has one ultimate purpose: to serve people. Therefore, these people should be kept informed as to what is being accomplished and how it will affect their products or their lives.

It all boils down to good public relations or good industrial relations. And here lies a real opportunity for the field of leather chemistry, not only to take a step forward itself, but to render a helpful service to the leather industry and the commercial success of leather as a product.

Dozens of highly technical papers are published annually in the Journal of the American Leather Chemists Association. There are scores of other unpublished findings emanating from the laboratories, equally as complex in title or content. What bearing do all these studies or accomplished results have on leather? Surely the content of these papers can be simplified through a "translation" or interpretation so that the leather-consuming industries (as well as the public) can be given frequent "progress reports."

This could and should be done by a special Public and Industry Information Committee set up by the American Leather Chemists Association. Its job would be to issue "plain language" reports on completed research studies in the field of leather chemistry.

Take a "simple" topic or term such as collagen, the protein fiber which combines with tanning agents to form leather. It is the basis of much of our leather chemistry. Yet how many fabricators who habitually use leather have any idea of what the term means, much less an understanding of its relation to leather?

Obligation to People

It is a fallacy to believe that science's primary obligation is to science. In the field of applied science its first obligation is to people via the industries it serves. Public or industrial service cannot be rendered from a remote high tower.

Science must participate in the function of industrial and public relations just as an industry or business organization is expected to do.

The American leather chemists have a fine opportunity, by setting up a committee such as suggested here, to give the leather-consuming industries and the public a fresh and exciting version of leather by publicizing its work and its research findings.

We repeat what we said before: nobody can be expected to appreciate a product or an effort until they are first given the means to understand it. Understanding comes only through directed information. And information comes only through a body set up to gather and disseminate it where it will do the most good.

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Annual Meeting

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Left to right: L. C. Pauling, Professor of Chemistry, The Gates and Crellin Chemistry Laboratories, California Institute of Technology; Geza Toknai, member of Spanish Leather Chemists' Association which will hold International Leather Chemists' Association meeting in Barcelona in September, Irving Glass, Fred O'Flaherty; Casper Drueding, left, presenting a Life Membership to E. J. White.

American Leather Chemists Meeting Spotlights 50 YEARS OF LEATHER-MAKING

Some 400 U. S. and foreign leather chemists sat down to a three-day meeting in Cincinnati and heard a detailed review of the advances made in leather chemistry and tanning over the past 50 years. The golden anniversary convention of the American Leather Chemists Association, June 7-10, was highlighted by a "progress report" in which some 30 different papers on leather chemistry and leather making were read.

There were several papers of a "general" nature of interest to the leather industry: shoes and foot health; leather for footwear and clothing; the French Tanning School; A history of the American Leather Chemists Association.

Over 100 ladies also attended the convention. A special program of activities was arranged for them by Mrs. August Boss.

The leather chemists three top annual awards went to Dr. Henry Merrill, of B. D. Eisendrath Tanning Co., who received the Alsop Award; Otto Haas, of Rohm and Haas Co., who was given the Frazer Moffat Medal; anl Dr. Seymour Kremen, research associate at the Tanners' Council Research Laboratory, who won the Winheim Award.

Seven men were given honorary life memberships in ALCA (requirement: a minimum of 40 years' membership). The men were: L. C. Scott, John M. Seltzer, E. J. White, Adolph Schubert, Edgar J. Rhoads, Roy Wisdom, and Boyd Gunnison.

One of the features of the three-day meeting was a visit to the Tanners' Council Research Laboratory at the University of Cincinnati. The Laboratory is celebrating its 30th anniversary since its founding in 1923. Today it is recognized as the leading Institute in its field in the world.

Three distinguished foreign leaders in the field of leather chemistry and tanning delivered papers: Dr. K. H. Gustavson, director of the Tanning Research Institute, Sweden;

(Concluded on Page 66)

ALCA Convention Highlights

- **Three new Council members elected:** Reuben Henrich, Surpass Leather Co.; Joseph R. Kanagy, National Bureau of Standards; Harry Wilson, B. D. Eisendrath Tanning Co.
- **Total attendance:** 500, including 100 ladies.
- **Award winners:** Dr. Henry Merrill, the Alsop Award; Otto Haas, the Frazer Moffat Medal; Dr. Seymour Kremen, the Winheim Award.
- **Total papers presented:** 30.
- **Outstanding features:** A symposium of eight papers on 50 years of progress in practical leather making, and another symposium of five papers on 50 years of progress in leather chemistry.

Left to right: Mr. Ernest Griess, President Foundation, Tanners' Council Laboratory, presenting the Fraser Muir Moffat Medal to Dr. F. O. Haas for transmission to the recipient Mr. Otto Haas; Dr. Fred O'Flaherty, left, presenting the Winheim Award to Seymour S. Kremen, University of Cincinnati; Casper Drueding, right, presenting a Life Membership to John M. Seltzer; Mr. James Cavanaugh, River Plate Corp., presenting the Alsop Award to Henry P. Merrill, Director of B. D. Eisendrath Memorial Laboratory.

50 Conventions

American Leather Chemists Association

Fifty years ago the American Leather Chemists Association was founded, with George A. Kerr as its first president in 1903. Among the 22 founders were such names as Alsop, Claflin, Drueding, Haley, Mosbaugh, Hoppenstedt, Kerr, Saxe, Reed, Teas, Small and Yocum. The first annual meeting was held in St. Louis in 1904, at the Louisiana Purchase Exposition, with a total attendance of 22 chemists and tanners. Since then, 49 annual meetings have been held, and following is a complete record of where and when these conventions were held.

Meeting	Date	Year	Hotel	Place
1st	Sept. 26-27,	1904	The Inside Inn	St. Louis
2nd	Nov. 15,	1905	The Normandie Inn	Washington, D. C.
3rd	Nov. 22-23,	1906	Grand Union Hotel	New York
4th	Aug. 29-31,	1907	Hotel Lexington	Chicago
5th	Nov. 12-14,	1908	Hotel Brunswick	Boston
6th	Dec. 2-4,	1909	Raleigh Hotel	Washington, D. C.
7th	Oct. 6-8,	1910	Hotel LaSalle	Chicago
8th	Dec. 7-9,	1911	Raleigh Hotel	Washington, D. C.
9th	Dec. 5-7,	1912	Raleigh Hotel	Washington, D. C.
10th	Dec. 4-6,	1913	Hotel Traymore	Atlantic City
11th	Oct. 28-31,	1914	Hotel Sherman	Chicago
12th	May 27-29,	1915	Marlborough-Blenheim	Atlantic City
13th	June 1-3,	1916	Marlborough-Blenheim	Atlantic City
14th	June 7-9,	1917	Marlborough-Blenheim	Atlantic City
15th	May 15-18,	1918	Hotel Traymore	Atlantic City
16th	May 22-24,	1919	Marlborough-Blenheim	Atlantic City
17th	May 27-29,	1920	Marlborough-Blenheim	Atlantic City
18th	June 9-11,	1921	Hotel Ambassador	Atlantic City
19th	June 21-23,	1922	Bigwin Inn	Canada (Huntsville, Ont.)
20th	June 7-9,	1923	The Greenbrier	White Sulphur Springs
21st	June 18-20,	1924	The Monmouth	Spring Lake, N. J.
22nd	June 3-5,	1925	Hotel Traymore	Atlantic City
23rd	June 2-4,	1926	Hotel Traymore	Atlantic City
24th	June 15-17,	1927	Univ. of Cincinnati	Cincinnati, Ohio
25th	June 6-8,	1928	New Ocean House	Swampscott, Mass.
26th	June 5-7,	1929	Chateau Frontenac	Quebec, Canada
27th	June 18-20,	1930	Hotel Schroeder	Milwaukee
28th	May 27-29,	1931	Hotel Traymore	Atlantic City
29th	May 25-27,	1932	Hotel Traymore	Atlantic City
30th	June 7-9,	1933	Hotel Claridge	Atlantic City
31st	May 23-25,	1934	Skytop Lodge	Skytop, Pa.
32nd	June 12-14,	1935	Skytop Lodge	Skytop, Pa.
33rd	June 10-12,	1936	Skytop Lodge	Skytop, Pa.
34th	June 8-11,	1937	Royal York Hotel	Toronto, Canada
35th	June 14-17,	1938	Bedford Springs Hotel	Bedford, Pa.
36th	June 5-8,	1939	Buckwood Inn	Shawnee, Pa.
37th	May 27-29,	1940	The Sagamore Hotel	Lake George, N. Y.
38th	June 23-25,	1941	The Sagamore Hotel	Lake George, N. Y.
39th	June 1-2,	1942	Deshler-Wallick	Columbus, Ohio
40th	June 2-3,	1943	Hotel Statler	Buffalo, N. Y.
41st	May 29-31,	1944	Pennsylvania Hotel	New York
*42nd	June 12-14,	1945		
43rd	June 18-21,	1946	The Sagamore Hotel	Lake George, N. Y.
44th	June 18-21,	1947	Edgewater Beach Hotel	Chicago
45th	June 17-19,	1948	Mt. Washington Hotel	Bretton Woods, N. H.
46th	June 22-24,	1949	The Monmouth Hotel	Spring Lake, N. J.
47th	May 31-June 2,	1950	French Lick Springs Hotel	French Lick, Ind.
48th	June 11-13,	1951	The Griswald Hotel	Groton, Conn.
49th	June 1-4,	1952	The New Ocean House	Swampscott, Mass.
50th	June 7-10,	1953	Netherland-Plaza Hotel	Cincinnati

****Note:* Was to be held in Cincinnati, but cancelled by Office Defense Transportation. So two regional meetings held: Western in Milwaukee, Oct. 17, at Hotel Pfister; Eastern in New York, Oct. 31-Nov. 1, at Hotel Pennsylvania.**

SLOW PROGRESS IN TANNING MACHINERY

Only a handful of really new machines in the past half century.

By T. C. Hollander

Manager, Tanning Machine Department

United Shoe Machinery Corporation

IT is an unfortunate fact that very few new machines have been developed during the past half century. There have been many improvements made in the old machines; but very few entirely new machine concepts.

The field for the products of tanning machinery manufacturers is too small. Also, these manufacturers have always to compete with an active second- and third-hand resale market of old tanning machines, which, in most respects, differ but little from the current new models. So, the total annual take of the tanning machinery manufacturers, as an industry, is small. Accordingly, the funds available to them for research and development are correspondingly small. No research and development—no new machines. It's as simple as that.

Advantages Of Leasing

The leading manufacturers of shoe machinery distribute the greater part of their production on a lease basis. This lease system provides the steady income necessary for continuous research and development. In effect, the shoe manufacturers have been financing the research and development programs which the machinery manufacturers have been conducting for them. Had this been the custom in the tanning machinery business, there would be a great deal more really modern machinery in use today.

Electric tow trucks and fork lifts represent another important step. Conveyors, of one sort or another, are commencing to put in an appearance. Of course, none of these—overhead cranes, electric trucks, conveyors—can literally be classified as tanning machinery, but they do represent mechanical progress.

Another example is the modern method of forcing fleshings, and hair, through pipes, by means of powerful pumps and blowers. Progress has been made in plant layout. It is possible to rearrange plant layout and machine locations in a manner that will cut down overhead expense to a tremendous extent. A certain midwestern tanner has completely renovated and rearranged his tannery since World War II. The working space has been cut from five stories to two. New machinery and equipment have been substituted for old. The payroll has been cut from 835 persons to 375. And this in spite of the fact that there were no radically new machines, but only old machines redesigned to bring them up to date.

The two big developments in tanning machinery during the past fifty years have been the introduction of individual electric motors in place of overhead shafting and belts; and, the use of hydraulics. But these developments do not really represent new tanning machines.

Few New Concepts

But all of these developments are being applied to old machines; they do not represent new machine concepts.

Another important step is the introduction of humidity controls in the dry departments of the tannery. The static electricity situation, always a problem in tanneries, can be substantially improved, and excessive shrinkage of leather in dry periods prevented. But humidifiers and air-conditioning systems, in use in many industries, can hardly be classified as tanning machinery.

Other real improvements have been made in the lime yards, by means of mechanical handling, agitation, heating, mixing, and conveying of the lime liquors. A great deal of hand labor has been eliminated.

Two Basic Machines

Broadly speaking, there are two basic types of machines in general use in tanneries. First, there is the full-width, helical-bladed, two-pass machine, which is used for fleshing, unhairing, scudding, setting or putting-out, and wringing. The basic concept of this machine dates back to the last century.

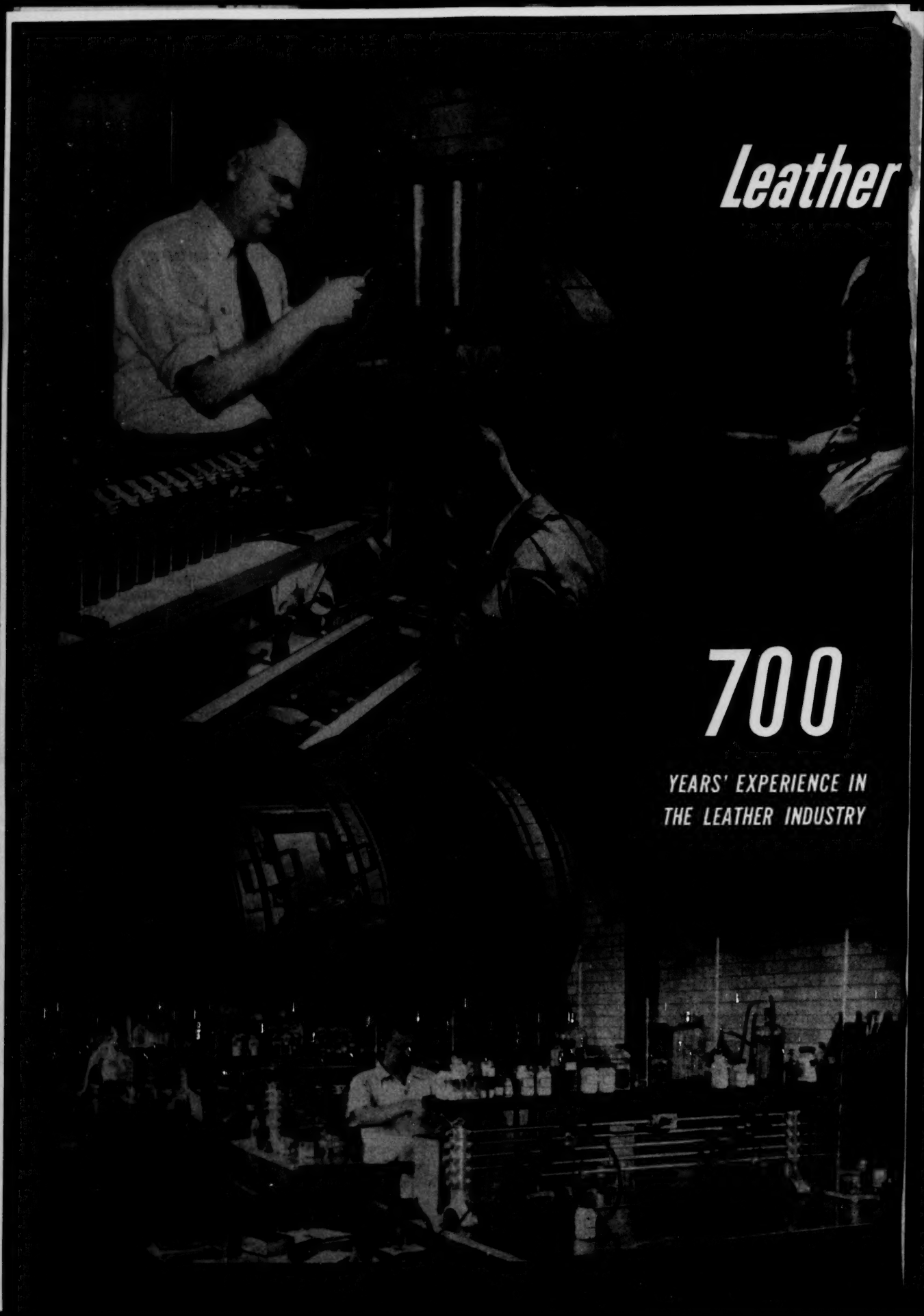
The second type of machine can be referred to as the jack type. In this classification come such operations as staking, glazing, and rolling, where the machine works on only a narrow strip of the leather at a time.

In operating either of these types of machines, a certain amount of skill is necessary; and, also, hard work. Sooner or later, all of these operations will be performed on continuous-feed machines which will take the skill out of the operation, and some of the back-breaking labor.

The tanning drum might well be classified as a tanning machine. How has it changed in fifty years? Darned little, as far as labor or production are concerned. The driving methods have been improved; there have been improvements in the manufacture of the drum, and experiments with glass linings, and stainless steel. But you're still using the drum. There has been no radical new invention to speed up the process. In many tanneries now drums are being loaded from overhead. That's a real improvement in handling. But, virtually, you are

(Continued on Page 67)

Condensation of paper delivered at convention of American Leather Chemists, Cincinnati, June 9.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Leather chemicals were the products that started this company in business 44 years ago. Today the bates, synthetic tanning materials, and finishes we are supplying to our customers are the best we have ever made. Our standard is dependable, uniform quality.

Our customers receive something else of measurable value—the benefit of more than 700 years aggregate experience of our leather research chemists and field staff. Every day in tanneries throughout the country Rohm & Haas representatives are applying knowledge of leather-making accumulated over more than 40 years. In addition they bring to bear on customers' problems the services not only of our leather laboratories but also other Rohm & Haas laboratories as well. Progressive tanners, year in and year out, continue to find these plus values helpful in the improvement of product quality.

Typical Example of Rohm & Haas Leather Technology at Work...

PRIMAL Finishes for Upholstery Leather

PRIMAL resins are lastingly flexible. As components of water finish systems, they impart toughness as well as improved filling and leveling qualities. As a base coat for subsequent lacquer coatings, PRIMAL finishes give excellent adhesion and improved stability over a wide temperature range.

CHEMICALS FOR INDUSTRY

ROHM & HAAS COMPANY

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PRIMAL *is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.*

for clean level
uniform shades

CALCOFAST* GRAY G

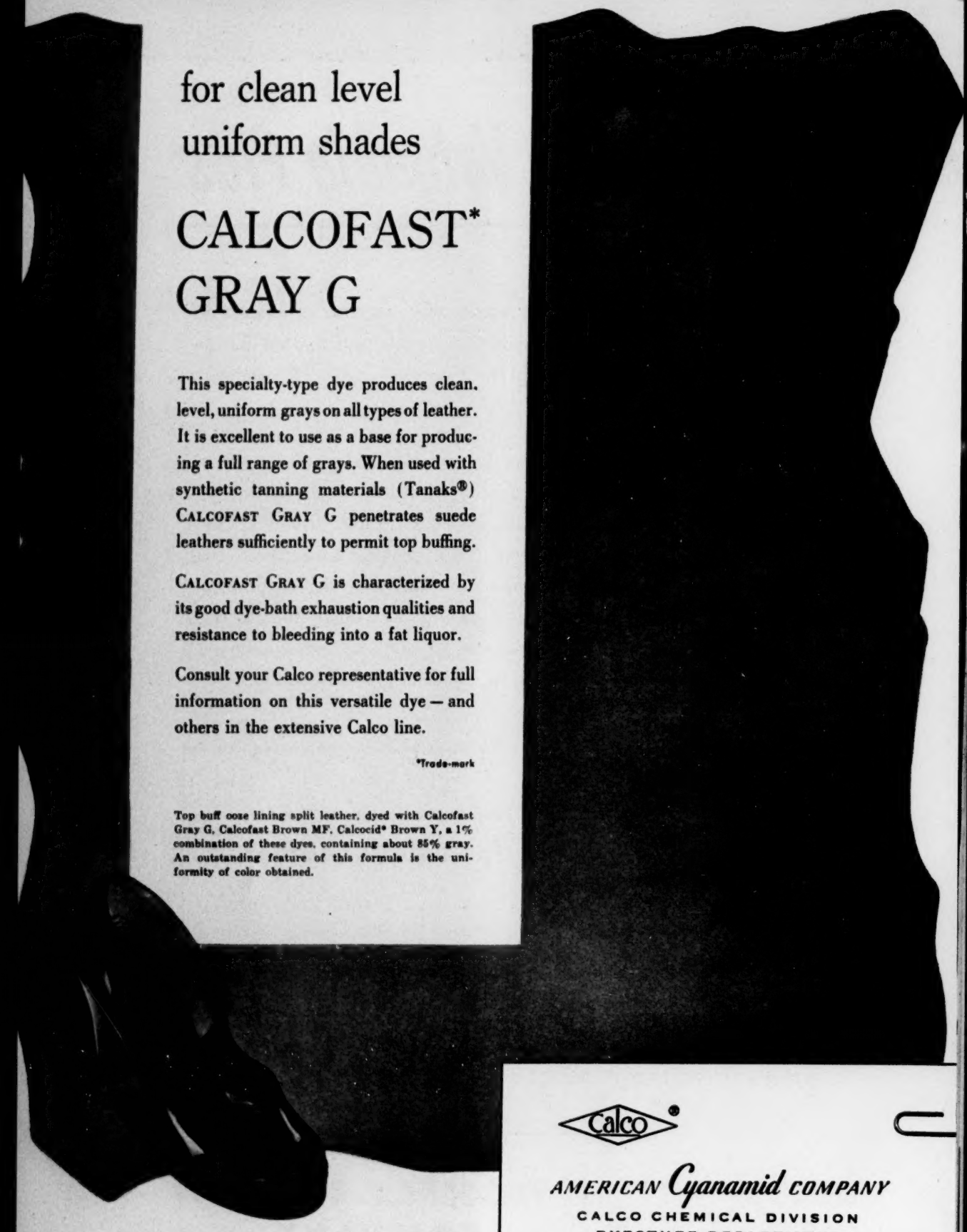
This specialty-type dye produces clean, level, uniform grays on all types of leather. It is excellent to use as a base for producing a full range of grays. When used with synthetic tanning materials (Tanaks®) CALCOFAST GRAY G penetrates suede leathers sufficiently to permit top buffing.

CALCOFAST GRAY G is characterized by its good dye-bath exhaustion qualities and resistance to bleeding into a fat liquor.

Consult your Calco representative for full information on this versatile dye — and others in the extensive Calco line.

*Trade-mark

Top buff ooze lining split leather, dyed with Calcofast Gray G, Calcofast Brown MF, Calcocid* Brown Y, a 1% combination of these dyes, containing about 85% gray. An outstanding feature of this formula is the uniformity of color obtained.



Calco®

AMERICAN Cyanamid COMPANY
CALCO CHEMICAL DIVISION
DYESTUFF DEPARTMENT
BOUND BROOK, NEW JERSEY

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CALCO CHEMICAL DIVISION
MONTREAL AND TORONTO

50 Years Of Leather Coloring

In 1900 the colors were black and browns. Today, more than 100 leather colors and shades are available—due to developments reported here.

By R. H. Leach
Calco Chemical Division
American Cyanamid Company

FIFTY years ago considerable progress had been made in the production of colored leathers. The dyestuffs we had in the early stages were excellent Phosphines; Bismarck Browns and shading basic dyes; and the regular line of acid and direct dyes including the Resorcine Browns, Acid Oranges, Reds, Yellows, etc.

Dyes were mostly imported, though some dyestuffs were being manufactured in this country.

We have the means of measuring the acidity or alkalinity today, whereas, years ago it was crude at its best. We had no method of controlling the acidity or alkalinity of dyestuffs. Today it is possible to dye our leather in baths with controlled and reproducible acidity measuring and controlling our pH.

In coloring leathers in the fifty-year period we have made improvements in the actual dyestuffs both in solubility and uniformity. Secondly, our ability to reproduce uniform conditions in the leather prior and during the coloring operations. Third, the development and production of dyestuffs better suited for the coloring of leather.

Pigment Finishes

With the introduction of pigment finishes prior to World War I a greater field for colored leathers was opened. These finishes covered the leather so that the tanner was able to take a relatively poorly dyed skin and make a saleable piece of colored leather. It enabled the tanner to greatly curtail the percentage of dye used and meet his demands for finished colored leather.

Condensation of paper delivered at convention of American Leather Chemists, Cincinnati, June 9.

In the earlier part of the century considerable so-called "buck" leathers were made both in colors and white. This leather was made from kip or larger sides, and was pearled and crusted like suede calf. It was buffed on the grain side instead of the flesh and a very short, close nap was produced.

Although buck leathers were made for a great many years, nobody successfully produced and put into production a black. Many attempts were made but due to the shortness of the nap it was almost impossible to add sufficient fat-liquor to develop the color without matting or causing a sheen when handled. It gradually lost favor around 1924-25 and for some years, aside from white, very little was produced.

Later this type of leather was colored from the shaved condition, thoroughly penetrated and then buffed on the grain side to produce the shades desired.

This presented a difficult coloring problem because it called for penetrating the leather at a sufficiently low pH so as not to have loose or coarse breaking leather when finished. The better penetrating dyestuffs were selected from the acid and chrome groups and these seemed to give the best results. This method of manufacture and coloring is still used at the present time. With this method we are not depending on loosely held pigment powder to obtain our shades, but rather on the actual shade of the dyed leather fibres.

Originally sueded leathers were made from small skins which were unsuited to finish for grain leathers. But defects on the grain surface have no appreciable effect on the flesh side. It was only natural that a process was developed to finish these skins on the flesh side and produce sueded leathers.

The method of preparing the skins from the chrome-tanned and shaved condition has changed very little with the years. Our preparation or pearling is about the same today as 50 years ago. The improvements that have been made in the past 15 to 20 years have been due mainly to the development of buffing machines which can be so skillfully adjusted that a more even, closer nap can be produced over a larger area of any given skin.

Early Methods

The early method of coloring seems to be an extension of the previous method given for grain leathers, although in suedes greater quantities of dyes were necessary to give the desired fullness. Suede colored in this manner became weaker so that if held over from one season to another it would not stand lasting and stitching. This deterioration in strength is something that a colorer of leather frequently encounters and is undoubtedly due to the penetrating dyes, dyewoods and strikers which have overtanned the leather and made the fibres more brittle. There are today many dyes which will penetrate the leather and have little or no detrimental effect on the strength.

Experiments were being carried on with an entirely different method of dyeing black suede-diazotizing and developing. Leather colored with this method was actually in production as early as 1910. It was possible to produce leather either penetrated or with a white cut at the option of the tanner.

This process continued the same until the early 1930's. Then a radical

(Continued on Page 70)

CHROME TANNING OVER 50 YEARS

Schultz discovered the process seeking leather coverings for corset stays.

By David B. Eisendrath

B. D. Eisendrath Tanning Co.

THE two-bath process, invented by Augustus Schultz, was the only chrome tannage then known during the last quarter of the past century. The one-bath process was just being developed. Schultz discovered the chrome tanning process while trying to find a way of producing leather which could be used to cover corset steels and prevent perspiration from rusting them.

Recently I came across a copy of *Hide and Leather* (now *Leather And Shoes)* issue of 1896 and found a series of articles by Proctor on "The Analysis of Used Liquors in Chrome Tannage," showing that 57 years ago, he already had developed control methods and was urging their use in our industry.

Tanning In 1903

By 1903 the two-bath process had been fully developed, and there has been practically no change or improvement during the past fifty years.

On the other hand, in 1903 the one-bath process was just coming out of its experimental stage. Pickling before tanning seems to have been the exception rather than the rule.

Chrome chlorides and sulfates seem to have been used more or less interchangeably. The effect of basicity was recognized, but there was considerable confusion between basicity and what we now know as pH. Thus Proctor refers to chrome chlorides as being less "basic" than sulfates when he meant that, for the same basicity, chrome chlorides have a lower pH value than the sulfates. The concept of pH was not brought out until several years later.

Fifty years ago we tanners were soaking our skins from 10 to 24 hours. Old soaks produced loose leather, and we believed that prolonged soaking in salt water gave us soft and empty leather. Most of us fleshed out of soak and resoaked for 4-10 hours. Liming was done over a period of nine to ten days, starting in old, weak or used limes, and progressing through newer limes, finally ending in a fresh lime.

Some tanners who were making side leather saved a few days by using sodium sulfide instead of arsenic. However, calf tanners believed that this chemical was too strong for the delicate skin of a young calf. But today we vary the soaking of our hides or skins to suit their cure and condition. We are now able to handle intelligently the liming or unhairing operation through the proper use of sulfhydrates, amines, sulfides, etc., in two to four days, and obtain better and more uniform results.

For nearly 80 years the calf tanners did head splitting or cheeking on a union splitter. And it was not until 1945, when our Quartermaster Corps commandeered and brought over from Germany a band knife head splitting machine, which had been in use there for more than 20 years but was unknown over here, that this job became one of the easier tannery jobs.

Technical Troubles

In the latter part of the 19th century skins were unhaired and fleshed by machine, but all skins were handbeamed. After unhairing and fleshing, the skins were held in cold water overnight. After a wash they were bran drenched, the forerunner of modern bating. Fifty years ago we used it to remove the lime from the skins. Most of us did not know how it worked. It was about that time that some chemists told us that it produced lactic and other organic acids and pointed out how we could save time and do a better and cleaner job by using lactic acid. Quite a few of us used dog manure in place of the bran drench. Tanners of goat, glove leather, etc., used bird manure. It gave us a silkier and finer grain. It was the action of enzymes present in the manure that produced the grain effect we wanted. This resulted in the production and use of prepared bates and deliming agents, saving time, eliminating odors, and helping to standardize our leather.

Yesterday's Problems

The necessity of avoiding too rapid tannage, especially of the grain, was recognized, but the means for accomplishing this were cumbersome and represented a carry-over from vegetable tannage. It was common practice to pre-tan with aluminum by giving an alum pickle. Tanning was started in weak, previously used liquors, that were gradually strengthened, or the stock was removed from weak to stronger liquors. Tanning was done in paddles or pits. Drum tannage is mentioned but not advocated except for hastening the tannage. The normal time required for the chrome tanning of calf skins usually extended over some days.

Thorough washing usually before shaving, and thorough neutralizing before drying and fat liquoring were emphasized. However, we did recognize the danger of overneutralizing.

Fat liquoring was done with soap-oil emulsions. Poor fat liquoring ofter resulted in finishing difficulties.

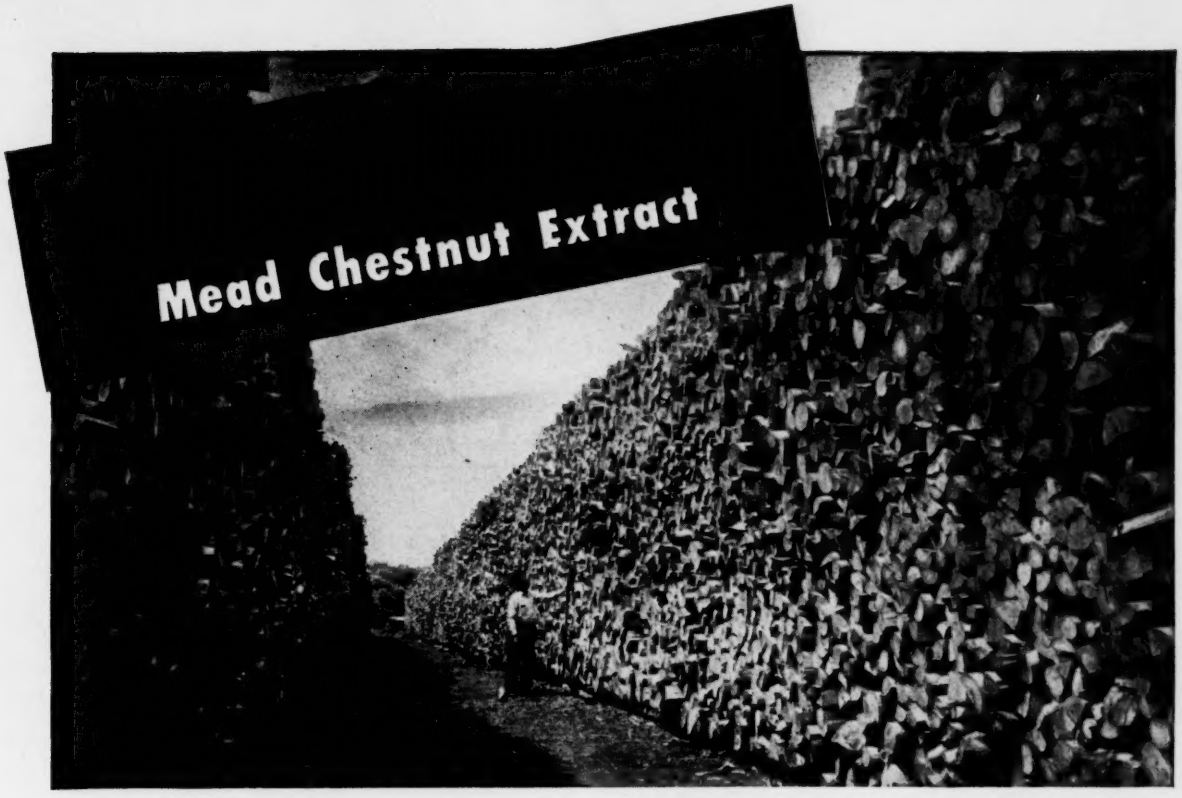
Very much of the same picture as to the state of chrome tanning is given in the book, "Modern American Tanning," published in 1902. It consists of a collection of articles that had been published in *Hide and Leather* (now *Leather And Shoes)*. In includes a copy of the original chrome tannage patent of Augustus Schultz dated January 8, 1884.

In the preface it states:

"The introduction of the chrome or mineral tanning process has revolutionized the upper leather industry,

(Continued on Page 75)

Condensation of paper delivered before annual meeting of the American Leather Chemists Association, Cincinnati, June 11.



This is only a portion of the many stockpiles of chestnut logs that insure a continuous supply of Chestnut Extract.

1. Is the supply of Mead Chestnut Extract adequate?

Decidedly yes. Recent surveys show that there is enough chestnut wood in our forests to serve the leather industry for many years to come. Huge chestnut stockpiles, such as the one shown above, are converted under chemical control at five extract plants, insuring a steady supply of Mead Chestnut Extract.

2. Why is Mead Chestnut Extract preferred over other tanning agents?

Mead Chestnut Extract is a superior tanning material, made by America's largest producer of vegetable tanning extracts. Repeated experience has shown:

A. Chestnut tanned leathers do not oxidize, darken on exposure to light, or develop an uneven color on aging, as do leathers tanned with many other materials, vegetable or synthetic.

B. Since the tanning system demands acid, the use of chestnut, with its plumping acidity, saves you money.

C. Mead Chestnut Extract eliminates up to 28% of leachhouse losses.

D. There are no hidden costs. When you use Mead Chestnut Extract, no time- and money-consuming preparation is required.

Ask about Mead Cold Soluble Chestnut Extract for retanned leathers. And—for more pounds of plumper leather—standardize on Mead Chestnut Extract.

IT'S A FACT!

Mead Chestnut Extract will produce more pounds of plump leather per unit of tannin than any other tanning material.

Vegetable Tannin	Tan Yard Yield (*white weight basis*)
Chestnut Wood Extract	67%
Tanning Material A	61%
Tanning Material B	63%

Calculate your tanning material costs on a leather basis as well as on a tan unit basis. Mead Chestnut Extract, producing four to six pounds more leather, means positive savings.

MEAD
CHESTNUT
EXTRACT

THE MEAD CORPORATION
Tannin Extract Division, Lynchburg, Virginia

Left to right: Dr. Karl Gustavson, Director, Tanning Research Institute, Stockholm, Sweden; Dr. John Highberger, United Shoe Machinery Corp.; R. L. Stubbings, Division of Leather Technology, Institute of Research, Lehigh University; Professor Paul Chambard.

ABSTRACTS

Briefing of papers delivered at Leather Chemists' meeting

"The Development of Syntans in U. S."

By T. Blackadder and I. C. Somerville, Rohm & Haas Company, Philadelphia, Pa.

The modern story of synthetic tanning materials began in 1913 with the announcement by Edmund Stiasny of the Discovery of Neradol. This syntan was quickly introduced into this country but became unavailable during World War I. In this period a number of products were put on the market which in some cases caused trouble due to the presence of dangerous acidity. In the early nineteen twenties the quality of commercial syntans was greatly improved and they became widely used as tan-assists in conjunction with vegetable tannins. The next step was their application to chrome leather, both as bleaching agents for making white leather, and to produce level or full shades on colored leather.

In the period prior to World War II some syntans were developed which could be used alone for the preparation of a small volume of premium white leathers. Their high cost prevented more general application. The search for a synthetic tanning material which could adequately take the place of critical imported vegetable tannins was intensified under conditions prevailing during the war and eventually yielded one product with outstanding properties. Subsequently information on the composition of German syntans was made available by teams of Allied investigators, but this has not yet resulted in new products widely accepted by the industry. Recent developments in this field include the application of synthetic resins and organic polymers in leather processing.

"Leather Oils"

By T. A. Faust, Yocum Faust, Ltd., London, Ontario

This is a historical review of the developments in various leather oils and fats since 1903. However, the writer also gives the history of some of these products before 1903, particularly the production and use of Cod Oil much prior to that time and also the first usage of Mineral Oils. The writer discusses the development and manufacture of the various types of oils and fats emphasizing particularly the production of Sulphated Oils which he considers the most outstanding development during the past half century. He also discusses the increasing quality and use of Mineral Oils and Stuffing Greases, the introduction of Mineral Oil Sulphonates, the recent development of the non-ionic fat liquors and makes brief reference to the economics of Synthetic oils and fats, similar to those developed in Germany during the last war.

"Modern Practice in Two Bath Chrome Tanning"

By Edwin E. Ochs, John R. Evans & Co.

Practical changes in the two bath tanning process for glazed upper kid leather made during the last world war when chrome was in short supply will be presented. The changes made resulted in the simplification of the two bath process as well as effecting both a labor and material conservation while still producing two bath type leather.

"Effect of Splitting on Breaking Load and Tensile Strength of Grain and Corium Splits from Chrome Tanned Leather"

By Meith Maeser, Research Division, United Shoe Machinery Corp.

The results of a large number of Tensile tests on grain and Corium Splits of different thickness are presented graphically. The meaning of the terms "Central Tendency," "Standard Deviation" and "Variance" are illustrated on the plots, and the true use of each in evaluating the data, is discussed.

Left to right: Fred Hilterhaus, John W. Pfeiffer, John S. Dean; William Hook, Eric Johnston, Joe Jany, Frank Edmonds, Robert A. Plow, R. J. Quatsch, Frank A. Faust; Lawrence Sheard, Henry Phillips, Travis Rankin, A. H. Steuwe, R. Steinhardt.

Left to right: Dr. Harold C. Turley, President, American Leather Chemists Association; Dominic Meo, Salem Oil and Grease Co.; J. Stanley Kirk, Convention Chairman; Dr. H. Phillips, Director, British Leather Manufacturer's Association.

"Extraction Method for Determination of Organic Acids in Vegetable Tanning Liquors"

By H. H. Silvestra and C. G. Telander, Armour Leather Company, Research Division Leather Research Dept.

An extraction method has been developed for determining the organic acid content of vegetable tanning liquors. Vegetable tanning liquors are extracted with successive extractions by employing a Tributyl Phosphate—Benzene mixture, in which the organic acids are soluble. Aliquots of extractions are titrated with alkali to pH 8.3. Modifications of the basic technique also make it possible to determine free volatile organic acid, free nonvolatile organic acid, volatile organic acid salts, and nonvolatile organic acid salts present in vegetable tanning liquors.

"Swelling of Collagen and Modified Collagens"

By J. Cassel and E. McKenna, National Bureau of Standards

The swelling of collagen and modified collagens has been investigated by a centrifuge method of determining the swollen weight and by a technique of weighing a swollen collagen section in the swelling medium, in air, and finally in a nonmiscible organic solvent such as heptane. The latter method permits the swollen volume per gram of protein to be calculated.

Data is presented on the aqueous swelling of hide powder tanned to contain varying amounts of chromium, formaldehyde, glyoxal, methyl, glyoxal, quinone, vegetable tannins and syntans. Also discussed are swelling curves of hide powders which have been deaminized, esterfied, or pretreated with calcium chloride solutions and then formaldehyde tanned.

"Heats of Wetting of Collagen, Leather and Other Organic and Fibrous Materials"

By Joseph R. Kanagy, National Bureau of Standards

A study has been made of the heats of wetting of collagen, different tannages of leather, and various textiles and plastic materials which may be used in the manufacture of shoes. In addition to the integral heats of wetting which is the heat given off when the dry material is placed in water, differential heats of wetting were determined for collagen, chrome, vegetable and retanned leathers and silk, cotton, viscose rayon, wool and nylon.

The significance of the results is discussed with regard to the comfort properties of the materials when used in shoes. Consideration is also given to the significance of the results in relation to the chemical and physical structures of the materials.

Top left: Robert Lotz, Robert Stubbings. Top right: M. A. Buckley. Bottom left: Howard Lincoln, Mrs. Harry J. Ward, Harry J. Ward. Bottom right: Archie Witherell, Bill Cashman.

"An Elucidation of Tanning Mechanisms"

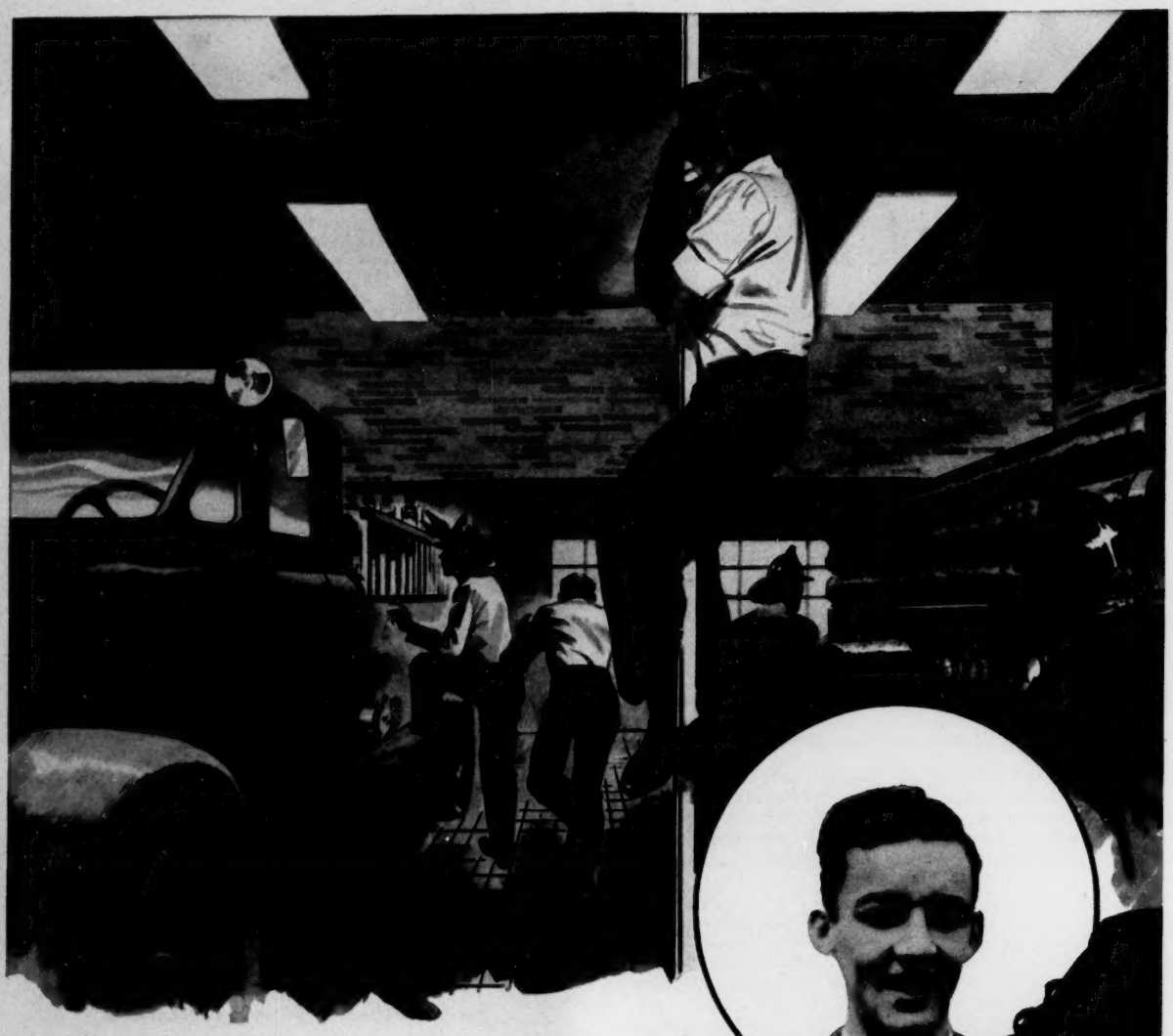
By Edwin R. Theis and R. L. Stubbings, Division of Leather Technology, Institute of Research—Lehigh University, Bethlehem, Pennsylvania

Further insight into the mechanism of tannage has been obtained through an interpretation of force-shrinkage data for tanned fibers. The force-shrinkage technique involves measurements of the shrinkage temperature under very low tension, the rate of increase of tension above the shrinkage temperature, and the final tension achieved by the fiber.

From the suggested shrinkage mechanism and the force-shrinkage data various tanning mechanisms for chromium, formaldehyde, and vegetable tanning are proposed which indicates the type of chemical bonding that occurs in each tannage. The magnitude and variation of the tanning effect is further illustrated by data for time pH and concentration of tannage.

(Concluded on Page 53)

Left to right: Karl Priddy, Ed. Thorstensen, R. C. Sidler, August Orthmann, Henry Merrill; J. D. Aderhold, Charles Lutz, William G. Pack, Bill Vroman; Gerald Glotzbecker, J. A. Casnocha, F. P. Mackinney, Harry Wilson, A. J. Pilar, J. M. Thornton.



Hard abuse or normal use —

"Celastic"* Box Toes Give Lasting Comfort

At work, at play and in the home — from the heaviest men's work shoes to women's high style footwear — "Celastic" box toes give the kind of toe comfort that leads to repeat sales.

The bond made by "Celastic" between doubler and lining forms a light yet extremely durable toe. "Celastic" gives shoes built-in wrinkle-free comfort in the toe area that the retailer and his customers can count on. Every shoe made with "Celastic" gains in style preservation and toe comfort at surprisingly little cost.

UNITED SHOE MACHINERY CORPORATION
BOSTON, MASSACHUSETTS

Smooth Toe Linings — Mr. Charles Kenney, a member of the Boston Fire Department assigned to Rescue Company No. 3, says: "I wore these shoes on duty and off in all kinds of weather and never had a moment's discomfort from loose linings in the toe"

*"Celastic" is a registered trade-mark of the Celastic Corporation

SAXON CALF

The first calf leather to combine imported quality with American efficiency. This A. C. Lawrence Saxon Calf has a fine, tight break — a mellow, springy temper — and an aniline appearance that combine to make it a sales leader for men's high quality shoes. Eight colors and black.

A. C. LAWRENCE LEATHER CO.
A DIVISION OF SWIFT & COMPANY (INC.)
Peabody, Mass.

It's naturally better

50 Years Of Leather Finishing

A report on the remarkable progress made in the science of leather finishing for shoe and other leathers over the past half century.

By A. J. Pilar

A. J. & J. O. Pilar

SHOE leather made in the early 1800's was vegetable-tanned and most of the work was accomplished by hard hand labor. Not until 1865 did the tanners begin to use labor-saving devices. The first important ones were the scouring and setting-out machines. These machines removed the "bloom," softened the leather, smoothed the grain. It was now ready for stuffing. This operation was important in the making of strong, flexible, water resistant, and smooth grain leather.

The stuffing compound was applied by hand to the flesh side of the leather, which was hung up to dry slowly. It was then set out on the Fitzhenry machine, and whitened by hand-slicking. This operation removed the crusty hard grain of the leather.

Heavy shoe leather was finished by hand and light leathers by machine. Between 1880 and 1883 the blacking, coloring, and dressing machine was invented. To this day there has not been any great improvement made over this first seasoning machine.

Early Practices

The early practice of finishing vegetable side leather for shoes was to have the sides stuffed and set out by machine, whitened, stoned, and if firm, softened by boarding. The sides were then taken to the blacking loft and the flesh was colored with either lamp black and oil or soap. The blacking crocked off and the free alkali in the soap caused the leather to have a harsh feel upon aging.

Corrected sides were hand-stuffed on the table, hung up, set out, slicker buffed, and trimmed. Staining was done with logwood extract, and while slightly damp was stuck with iron-rust and copperas. The grains were sponged with flour paste, dried and softened by boarding with flesh up. A clear tragacanth solution was applied on the grain over the flour paste.

Waxed calf leather was finished by the following method: After stuffing the grain leather with fish oils, paraffine, oleine and rosin, it was set out, taken to the finishing room and blackened with logwood and struck with copperas, glassed, boarded, polished, oiled off with fish oil and paraffine.

Finishing French Kid

To finish imitation French kid, the grain on kid skins was stained with logwood, Chinese nut galls, and iron liquor. The skins were then hung up to air dry, blackened again, omitting the nut galls, and adding a small amount of bichromate of potash, put on hooks with the blackened side inward until the color set, and then taken down and a solution of milk and water was applied to the grain. This leather was glazed by machine, then softened with a hand softening slicker. The grain was oiled off with the best grade of raw sperm oil, which was applied with a roll of soft flannel cloth. It was glazed two or three times and oiled off twice. After the final oiling off it was glazed again.

The glazing machines were, without a doubt, responsible for making goat, kid, and calf upper shoe leather, and, in the opinion of the high grade light upper leather manufacturers today, it is almost impossible to produce this type of leather without a glazing machine. The machines were improved rapidly.

Several leather finishes were patented in the Seventies. Hugh Smith of Newark, N. J., invented a coating to make a new grain on buffs and splits.

In 1871, Franklin S. Merritt of Boston made imitation alligator leather. He tanned leather for japanning purposes, wet it, passed it between two rolls, one of which was engraved with an alligator design, boarded the leather lightly and dried. Then he took Xylonite sheets and stuck them to the leather with Collodion, passed the leather through smooth rollers and it was finished. Merritt was the first to make nitrocellulose plastic coated leathers.

Although a number of people had been working with chromium chemicals in the preparation of leather prior to 1884, Augustus Schultz made the first important advance in practical chrome tanning. It was in the Nineties when Martin & Dennis made the one-bath tan of basic chromium sulfate. In 1902, the writer received a patent for his development of a special one-bath tan using the same ingredients as Schultz used in his two-bath process.

Chrome Tanning

The chrome tanners' production ranged from 1800 to 40,000 glazed kid and goat skins a day. Nearly all the leather was put into blacks. There has been little change to date, with the exception of the addition of a small quantity of good black pigment to fill up the damaged grain and darken the grey or silvery effect of the large hair cells. The finishers had their troubles making uniform leather because the skins were not properly fatliquored for finishing. Vegetable-tanned leathers would absorb a large quantity of the oil and grease but the chrome leathers absorbed very little and the chrome

(Continued on Page 72)

Condensation of paper delivered before American Leather Chemists Convention, Cincinnati, June 9.

All identifications left to right.

Top row. James Thornton, M. L. Anderson; Klaus Hammerling, Donald Bundy; Rolf Quarck, Perry Smith. Second row. Augie Orthmann, Craig Blair, Thomas Blair; C. M. Morrison, Jr., Thomas Faust; Leon Monnier, Jr., George Martin, Carl Muckenhirn. Third row. Francis O. Schmitt, John H. Highberger, Mrs. John Highberger, Dr. Linus Pauling, Mrs. E. E. Doherty, E. E. Doherty; Bunny Teas, Sandy Saxe, Casper Drueding, Bunny Drueding, John Teas, Vaughan Byron. Fourth row. Edward G. Suffern, Gene Stanberry; William A. Rossi, Lawrence L. Jones; Milton Hart, Bill Cronin. Last row. Les Armstrong, Mather Grum, Jack Van Sciver, Henri Krabowski, Jakob Rohwer; G. Walter Schultz, Clyde Carter; Harold Sabaen, Frank Chadwick, M. W. Folger, Jr., Clinton E. Retzsch, A. Howard Steuwe.

LEATHER DYESTUFFS

Back in the year 301, wool cost $1.50 a pound, but when dyed cost $350. Costs and methods of dyeing have seen some drastic changes since then.

By C. K. Black and C. H. Geister

Technical Laboratory

Organic Chemicals Department

E. I. du Pont de Nemours & Co., Inc.

THIS is a report on the progress made in dyes, and in dyeing of leather during the last fifty years.

For centuries all dyeing was done with natural dyes of animal, vegetable or mineral origin.

Natural indigo, woad, saffron and madder, all of vegetable origin, were used by the ancients to produce blue, yellow, and red colors. Small insects furnished cochineal, while shellfish were the source of the very expensive Tyrian purple. A price-fixing edict in the year 301 A.D. set the price of wool at about $1.50 per lb. Heavily dyed with Tyrian purple the price was $350 per lb. It is no wonder it was used only by royalty.

When trade with India was inaugurated, cutch and gambier obtained from certain trees were used for brown shades. Later from America fustic and logwood became important dyes.

Synthetic Replace Natural

In recent years natural dyes have been almost completely replaced by synthetic dyes. The following classification includes the types of most interest to the leather industry:

1. *Basic Dyes:* These produce bright, strong shades of relatively poor light fastness. Basic dyes are important on leather to obtain full shades and brilliance. They will dye vegetable-tanned leathers without a mordant but chrome-tanned leather must be mordanted with syntans or acid dyes to be substantive to basic colors.

Summary of paper delivered before annual meeting of American Leather Chemists, Cincinnati, June 9.

2. *Acid Dyes:* These dyes are used on animal fibers and are particularly important on leather. They are retained on paper by the use of rosin size and alum. Heavy metal salts of acid dyes are used as insoluble pigments. The brightness and light fastness of these colors vary widely. On leather, acid dyes penetrate well and in general produce level dyeings. They are used extensively on chrome tannages.

3. *Direct Dyes:* These dyes derive their name from the fact that they will dye cotton directly without the use of mordants. In addition, they are used on leather.

Little Substantivity

Brightness of shade and fastness to light vary with chemical constitution. Direct dyes exhibit but little substantivity for vegetable-tanned leathers. When used on chrome-tanned stock, they tend to dye the surface only unless alkali is used to promote penetration.

Most of the dyes now used on leather were available 50 years ago. Synthetic dyes were rapidly supplementing and replacing the natural extracts. Brighter and more varied shades were available and a uniformity of shade became possible which could not be had with extracts of variable color.

However, many changes in the dyeing of leather have taken place during this period. The quality of the dyes has improved greatly over the years. Many new dyes have been synthesized especially for use on leather. Dustless types have been made to aid the handling of dyes in a tannery.

A great deal of progress has been made but obviously much remains to be done. The present trend indicates that it will be necessary to improve light, wash and crock fastness properties. Unfortunately, the use of the present syntans, filling materials and vegetable extracts seriously limits the affinity of dyes other than basic colors which are fugitive to light.

Leather, as it is now tanned, will not tolerate the strongly alkaline conditions necessary for the application of vat dyes which would produce excellent fastness results.

Application Heeds Improvement

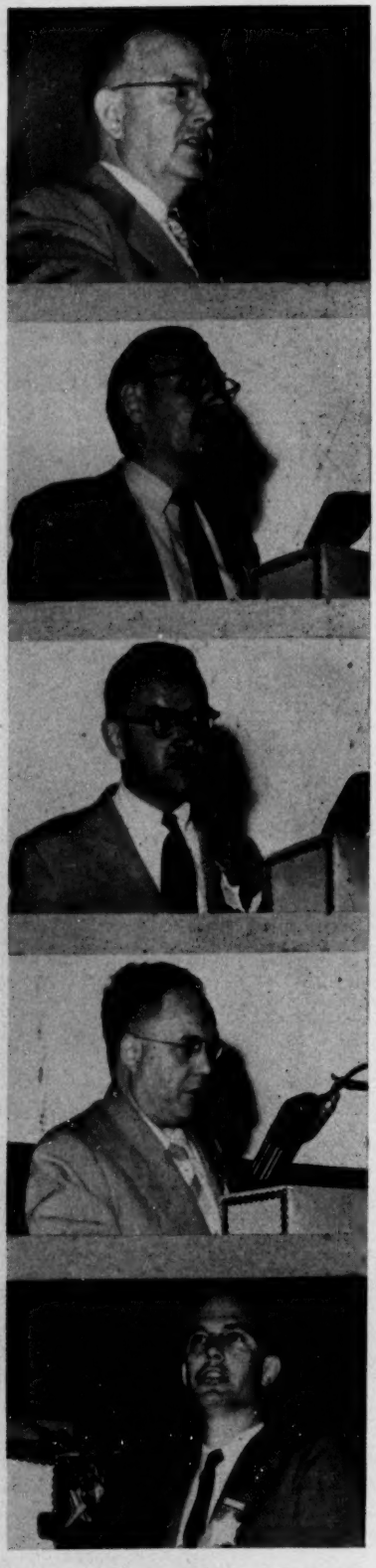
The application of dyes to leather should be improved. In many cases such a low volume of water is used that the dye is not completely dissolved. Dyes are frequently forced onto leather by the addition of acid instead of allowing normal exhaustion to take place. Such forcing results in plating of precipitated dye on the surface of the leather.

There is a need for the development of basic dyes having better wash and light fastness and acid dyes having affinity for syntans and extracts.

Finally, since leather is a costly material, it should be prepared with the utmost color appeal and utility. Appearance is an important factor in sales. Therefore, stringent price limitations of dyeing and careless selection and application of dyes should be avoided.

All identifications left to right.

Top row. A. Howard Stuewe, Clinton Retzsch, L. A. Swedenborg, Floyd Collins, Marden Lindsay; Frank Numan, Fred Henning, R. C. Camp, George W. Collins; John Harnly, Ed. Aulson, J. E. Gillen, Charles Robson, J. H. Gardner. Second row. Ernest O. Janson, Herb Tetzlaff, Sandy Saxe, Frank Edmonds, Bill Tefft; Elmer Knoernschild, Karl Klanfer, Perry Smith; Clyde Carter, Frank H. Faust, Ted Fee. Third row. John W. Pfeiffer, R. H. Leach, Dan Lord; Charles Daving, Titus Weaver, Ralph Ewe; Sandford Aranberg, C. David Wilson, Reuben Henrich, William Cronin. Fourth row. William Vroman, Fred Artz, Harry Widney, Art Goetz; George Hodgson, Frank E. Smith, Tom Faust; Frank H. Faust; C. G. Schneider, Herb Tetzlaff, Ray Hirsch, Karl Hilterhaus. Fifth row. George Somer, D. L. Drummer, Steve Demain, Perry Smith, Carl Telander; N. Gallagher, N. B. Neher, M. M. Baldwin; L. M. Whitmore, G. H. Maloney, Herbert Low, Hugh Trask. Last row. Robert Shaw, J. E. Hammond, Ralph Koop, Milton Hart; Alan G. Goldsmith, Gene W. Stanberry, Fred Thayer, Jr., E. S. Flinn; J. J. Baker, John M. Seltzer, Gene Stanberry, R. L. Young, Jr., William Z. Beier, Paul Stahnke, Karl Gustavson.



ALCA Speakers

Top to bottom: C. W. Beebe, Eastern Regional Research Laboratory; Dr. C. K. Black, E. I. DuPont de Nemours & Co.; T. C. Hollander, United Shoe Machinery Corp.; Dr. I. C. Somerville, Rohm & Haas Co.; Dr. Robert M. Lollar, University of Cincinnati.

Better Leather Is Resulting From

COLLAGEN RESEARCH

A practical interpretation of collagen chemistry and what it means to leather and practical tanning.

By John H. Highberger

Associate Director of Research

United Shoe Machinery Corporation

SCIENTIFICALLY minded tanners have long recognized the importance of learning more about the nature of collagen, the fibrous protein of the skin, since it was known that it was collagen that combined with tannin to give leather. But a half century ago, very little was known about proteins or protein collagen.

It was gradually established that all proteins are built up from comparatively simple chemical compounds called amino acids. About twenty different kinds of these are known, and two molecules of any of them (the molecules may be the same, or different) may be reacted with each other under certain conditions to split out the elements of water between the two parts and join them together to form a more complex compound, called a peptide. This may in turn react with additional amino acid units to form still more complex peptides; and if enough amino acid units could be joined together in this way, a protein would result.

The chemist cannot actually synthesize a protein because there are too many units involved in the proteins. He can, however, put enough units together to be certain that this is the way they are put together in the natural protein, although the methods by which this is accomplished in nature are beyond his reach at the present time.

When amino acids are put together into the form of complex peptides, a long chain-like structure results. This may be likened to a string of beads, in which each bead represents a single amino acid as it is built into the peptide chain. If each of the 18 different kinds of amino acids is represented by a different colored bead, chains of different patterns can be constructed. The number of variations in color pattern is almost endless, and each of the peptide chains of which a particular color pattern is the simple representation will be an individual compound, with chemical and physical properties different from those of chains of all other patterns.

The job of the protein chemist consists not only in finding out the total number of amino acids of each kind that are present in the molecule of the protein, but also the pattern in which they are put together along the chain.

The first part of this job is now almost complete for collagen. Since 1948 chemists have been able to account for over 99 percent of the weight of collagen in terms of the individual amino acids contained in it. Some uncertainty still exists as to the total number of "beads" which make up one collagen chain; there is reason to believe that this number may be around 600. It is, however, almost certain that all the different kinds of building units are now known for collagen.

The second part of the problem is now being attacked: finding out the pattern in which the beads are arranged in the chain. They consist essentially of the study of short frag-

(Continued on Page 74)

Report on paper delivered at annual meeting of American Leather Chemists, Cincinnati, June 9.

The Structure Of Vegetable Tannins

By Robert M. Lollar

Tanners' Council Research Laboratory

University of Cincinnati

THE vegetable tannins, a complex group of poly-phenolic compounds extracted from various plant sources, are utilized in large quantities in the leather, petroleum, water treatment, ink and pharmaceutical industries. Their broad industrial significance has led to their chemical properties being intensively investigated during the past half century.

The vegetable tannins have long been known to be different in properties when secured from different plant sources. Tanners have long recognized that some tannins such as myrobalans, valonia and divi-divi are especially valuable because they contain sugars which yield acids upon fermentation. These tannins readily break down to form deposits known as bloom in the leather. Hence, these tannins are known as hydrolyzable tannins.

In contrast, such condensed tannins as quebracho or wattle are resistant to fermentation and yield a gummy sludge known as phlobaphene, or reds, when treated with acid. Tanning extracts differ in their content of tannins and non-tannins. The tanner has made use of these differences in the composition of the several tannins by forming blends of the several tannins to yield the qualities in the leather which he desired.

This tremendous variety in the practical properties of the vegetable tannins led the organic chemists of the past half century to a study of the chemistry of these substances. They made the basic assumption that a particular and specific structural formula would be correct for each of the vegetable tannins. Therefore, they attempted to isolate a purified tannin which they then subjected to chemical analytical decomposition, and isolated and identified the decomposition products. Synthetic products were then prepared as the nature of these decompositions suggested. Comparison of the chemical properties of the purified natural tannin and the synthetic product was then used to validate the synthetic product's formula.

Result of Studies

These studies resulted in structural formulae being suggested for such tannins as gallo tannin, chestnut, divi-divi, myrobalans, quebracho, wattle and hemlock. However, research workers could not agree on a single formula for any of these tannins. Further, the literature is singularly devoid of any data on the comparative tanning properties of the synthetic products.

New techniques for the identification of components of unknown organic products have become available during the past decade. These techniques involve various absorptive fractionation techniques to isolate single component products. Structural studies on these fractions are then carried out with considerably better accuracy.

The application of these techniques to many of the tannins has resulted in the evidence that the tannins are not single component systems. Hence it is not surprising that the several structural formulae deduced from study of incompletely fractionated materials should be in disagreement.

The English tanners have found that practical use can be made of the knowledge gained in the physical chemical studies of the vegetable tannins to yield a more controllable tanning system. They find that it is possible to blend wattle tannin with the proper quantities of salts and acids to produce a tannage which can replace the conventional blended extract tannages.

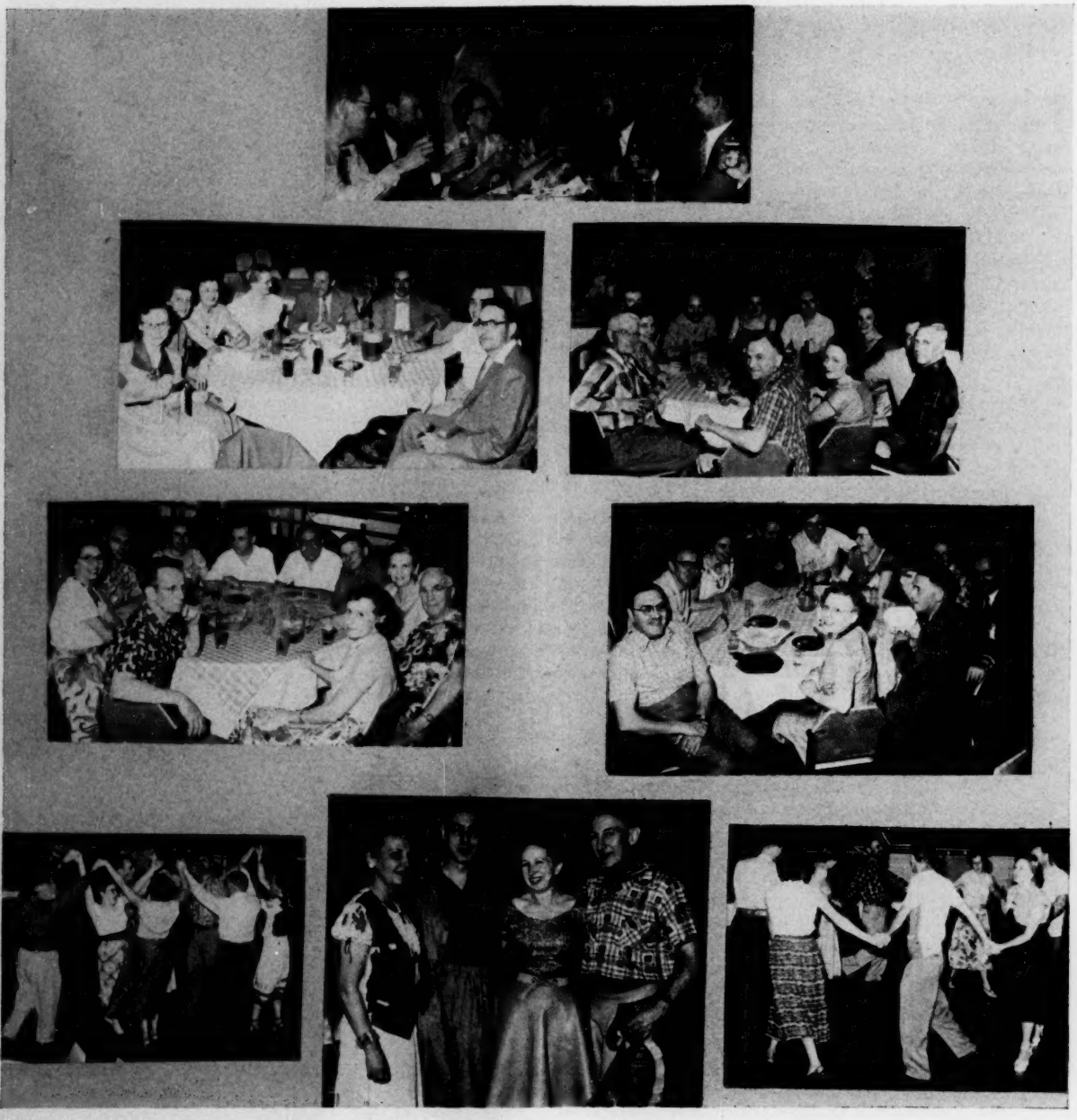
This development from the practical viewpoint is representative of the type of developments which are possible in leather chemistry when sufficient fundamental knowledge is available. Even though we still are not certain of the exact structural formulae of any vegetable tannin, we have learned to control the properties of the extracts to produce more efficient use of the available extracts. Thus, the dependency of our vegetable tanning industry on exotic tannin sources can be minimized.

Summary of paper delivered before annual meeting of the American Leather Chemists Association, Cincinnati, June 11.

ALCA Speakers

Top to bottom: Edwin E. Ochs, John R. Evans & Co.; C. G. Telander, Armour Leather Co., Armour & Co., Leather Research Dept.; T. A. Faust, Yocum Faust Ltd., London, Ontario, Canada; R. L. Stubbings, Division of Leather Technology, Institute of Research, Lehigh University; J. Cassel, National Bureau of Standards; L. E. Gaul, M.D., Evansville, Indiana.

"DO-SI-DO AND AWAY WE GO"



All identifications left to right.

Top. Helping Ed. Thorstensen celebrate his birthday were the following "elbow-benders": Ralph Smitka, Ed. E. Doherty, Mrs. Mabel Thorstensen, Mrs. Ed. Doherty, Ed. Thorstensen, and Meith Maeser. Second row. Clockwise around table: Mrs. Clinton E. Retzsch, Mrs. Frank Chadwick, Mrs. Harold Miller, Mrs. Bernard Roll, Frank Chadwick, Clinton Retzsch, Bernard Roll, and Harold Miller. Clockwise around table: Dr. Robert Shaw, Mrs. Robert Shaw, Mrs. Ian Somerville, Dr. Ian Somerville, Mrs. E. D. Compton, Dr. E. D. Compton, Mrs. Oscar Wederbrand, Charles Martin, Oscar Wederbrand, Mrs. John Elliott and John Elliott. Third row. Clockwise around table: J. S. Kirk, Mrs. Jakob Rohwer, Steve Shives, Mrs. Herbert Low, Mr. Herbert Low, T. D. Braunschweig, Jakob Rohwer, Mrs. F. L. DeBeukelaer, F. L. DeBeukelaer, and Mrs. J. S. Kirk. Clockwise around table: Dr. H. G. Turley, Carl Telander, Mrs. R. C. Camp, R. C. Camp, Martin Baum, Mrs. Martin Baum, Mrs. Joe Jany, George Somer, Joe Jany, and Mrs. George Somer. Last row. One of the typical "heel-raising" scenes at the dance: Mrs. Erned Janson, Dr. Wallace Windus, Mrs. Edwin Ochs, and Gus Boss: Another group under full sail.

Top row. Vernon Norton, George H. Meyer, O. K. Meyer; Ed. Thorstensen, Fred Thayer, Jr., Robert Koppenhoefer; John R. Lamb. Carl Muckenhirn. Second row. Richard Drew, Gus Boss, Harold Willis, H. A. Coey; H. G. Goldberg, John Teas, W. J. Peterson; Herb Tetzlaff, Arthur Huegel, C. Harrington. Third row. Mrs. Edwin Cobett, Mrs. John Maloney, Mrs. Lyall Whitmer; Paul Stahnke, Art Sauer, Ed Aulson; R. E. Porter, David W. Cookall, Arthur Schroeder. Fourth row. Ted Feldman, Melvin Castleman, Irving Weiss; George Strauss, Australia, A. A. Ganesan, India, M. A. Ghani, India; J. E. Gillen, J. H. Gardner, Frank H. Faust. Fifth row. Jack Pike, R. H. Twining; Jakob Rohwer, Charles M. Morrison, Jr., Leon Monnier, Jr.; Mrs. Robert Stubbings, Mrs. Lawrence Sheard, Mrs. Martin Baum. Last row. E. S. Flinn, Fred E. Artz; William Z. Beier, Perry Smith, Joseph J. Baker, Clyde Carter; Karl O. Priddy; Charles J. Knisely, Dominic Meo, J. Stanley Kirk.

LEATHER CONTRACT TALKS DEADLOCKED

BAY STATE WORKERS AUTHORIZE STRIKE

Pension Plan Is Believed Stumbling Block

Threat of a strike in some 45 Massachusetts tanneries spurred last minute negotiations late this week between representatives of the Massachusetts Leather Manufacturers Association and Locals 20, 21, and 22 of International Fur and Leather Workers Union.

In a series of mass meetings held Tuesday, June 16, union members voted to authorize their negotiating committees to call a strike if negotiations should break down. The union represents some 6,000 workers in the Peabody, Salem, Lynn, Danvers and Woburn area.

Biggest stumbling block in the path of a quick settlement was reported to be the union's insistence upon a pension plan in the new contract. Although the exact nature of IFLWU demands has not been officially released, it is understood the union is seeking a wage increase coupled with a pension plan for all workers.

Business agents of the union locals said manufacturers had "arbitrarily rejected union proposals that all issues be submitted to arbitration." However, Bertram Creese, secretary of the Manufacturers' Association, said the association was reluctant to submit to arbitration because "we do not want to place the future of our industry in the hands of an outsider."

Creese said the situation was too complex to trust to an arbitrator. He added the manufacturers would prefer a fact finding board.

Meantime, tanneries continued to produce leather as most workers remained on the job. Here and there, throughout the week, a group of workers would leave their jobs only to return shortly thereafter. The original contract expired April 25 and was extended by written agreement until May 28. As of the moment, manufacturers are working under the old contract although none is in effect.

The strike vote, taken at mass meeting June 16, did not set a deadline for termination of negotiations. For this reason, close observers felt IFLWU was not anxious to call a strike. Spokesmen for both parties said they were closer to agreement than they had been since new contract discussions began.

Union workers are currently earning an average pay of $1.85 per hour. The Manufacturers Association claims that tanneries in the area, most of which are small and subject to unstable market conditions, cannot possibly pay more.

NEW CONSULTING FIRM

Joseph J. Baker, tanner and superintendent of G. F. Zeller's Sons, Buffalo sole leather tanner, is reported to have organized a new sole leather consulting firm for tanners and shoe manufacturers.

Harlan Markley, Baker's assistant at Zeller's, and Raymond Moore, operator of the Moore Laboratory in Buffalo, will also be associated with the new consulting firm in Buffalo. The three men have a combined total of 115 years of experience in the leather industry. Baker has 50 years, Markley, 25 years, and Moore, 40 years.

Zeller's Sons is reported in process of liquidation.

ELKLAND PACT SIGNED

Officials of Elkland Leather Co., Elkland, Pa., tanner and International Fur and Leather Workers Union have reached agreement on a new labor contract calling for a wage increase of three cents per hour, retroactive to May 1, 1953, and an additional two cents per hour, effective Sept. 1, 1953. May 1 was the expiration date of the former contract.

No wage reopening clause is included in the new contract which will expire Sept. 1, 1954.

Damascus Tanning Co. of Coudersport, Pa., has informed all production and maintenance workers that it is instituting a general wage increase of five cents per hour for the current pay period. The company, which makes sole leather, is non-union.

Chicago Rawhide Mfg. Co. of Chicago has granted workers a general wage increase of 10 cents per hour in a new agreement reached with International Fur and Leather Workers, worker bargaining agent.

Amalgamated Leather Cos. of Wilmington, Del., has also reached agreement with IFLWU. New contract provides for a general wage increase of five cents per hour.

PARCEL POST RATES BOOSTED 36 PERCENT

Increases Effective About August 1

The shoe industry's battle to keep parcel post zone rates at current levels met with failure this week as the Interstate Commerce Commission authorized a 36 percent increase in zone charges.

The new rate schedules, expected to bring an additional $153,525,000 in revenues to the Government, will probably be put into effect on August 1 of this year.

The ICC ruling, coming after lengthy hearings in Washington at which shoe and other manufacturers dealing in mail order business protested any increase, gave the Post Office Department exactly what it had asked. Recommendations of the Post Office were endorsed in toto, including elimination of an earlier Post Office proposal of surcharge rates for parcels carried outside of mail sacks.

The boost applies only to fourth class or parcel post packages requiring a zone rate. Still awaiting an ICC decision is a proposed increase in rates on catalogs and publications mailed under the general classification of parcel post. The latter are classified as "controlled circulation publications."

Under the new parcel post rates, a one-pound package mailed for local delivery will cost 18 cents rather than 15 cents to mail. A five-pound package will be charged 24 cents instead of 20 cents. Zone rates vary according to distance.

Parcel post accounts for some two percent of mail handled by the Post Office and brings in about 21 percent of its revenues.

Wholesale Shoe Sales Down In April

Wholesale sales of shoes came to $27,419,000 during April of this year, the Census Bureau reports.

This is 19 per cent below March, and one per cent below April a year ago, the bureau said.

For the first four months of this year, however, wholesale sales of footwear was six per cent ahead of the same period a year ago.

Wholesale inventories stood at $79,751,000 at the end of April, about 19 percent higher than in March, and 14 per cent higher than in April a year ago.

GOOD QUALITY HIDES, STABLE PRICES URGED AT HIDE CONVENTION

The hide and leather industry must assure consumers of good quality coupled with reasonable prices if it is to meet the challenge of competitors, according to Merle A. Delph of M. A. Delph Co., Inc., Indianapolis, Ind.

Delph was a principal speaker at the Ninth Annual Meeting of the National Hide Association held Monday, June 15, at the Shamrock Hotel in Houston, Tex. The meeting was attended by a good turnout of hide brokers and dealers from over the country.

Nick Beucher, Jr., of Packinghouse By-Products Co., Chicago, was elected president of the National Hide Association at the group's ninth annual meeting held June 15 in Houston, Tex. Beucher has been serving as vice president of the NHA.

Other officers elected were Frank Pachin of Dayton, O., vice president; Charles F. Becking, of Chicago, secretary; and Merle A. Delph, of Indianapolis, Ind., treasurer.

Six directors elected were John Hodges, Lee Lyon, Alfred Jacopshagen, Lester Roberts, Charles F. Becking and Norman Galbraith.

John K. Minnoch is executive director of the association.

Delph emphasized the necessity for continually improved handling of hides in packer cellars and by hide dealers. He pointed out that take-off and curing techniques had been bettered in recent years but added there is still room for considerable improvement.

"Due to present day high freight rates, from producing points to tanners, I can see more trimming of hides being done at the source," Delph said. "This is due to tanners becoming selective as to the type of leather they will produce instead of the large general lines they produced in the past. We, as hide brokers, will be sorting hides more selectively as to plumpness, classified weights, damage, grubs, etc. When a car of green salted hides is delivered to a tanner, it will produce for him the type of leather that he himself is known to be able to supply leather buyers."

Delph said it is vital the entire hide and tanning industry keep prices reasonably stable lest it be priced out of the market competitively by synthetic products. He declared leather in a variety of uses was experiencing a revival and packers, hide dealers and tanners would do well to work together to keep prices competitive.

Other speakers at the morning session were Abe Drasin of Wolverine Hide Co., Grand Rapids, Mich., retiring president of NHA; Lester Roberts of Les Roberts Hide Co., Houston; and J. D. Sartwell of Port City Stockyards, Houston. Edgar K. Orr, president of Edgar S. Kiefer Tanning Co., Grand Rapids, was unable to attend and his talk was read to the group.

Orr was also presented "in absentia" with the NHA Medal of Merit for the "greatest good to the leather industry during the past year." The award was presented by Ed Stritzel of Stritzel & Co., Chicago.

Luncheon speaker was Homer Garrison, Jr., chief of the Texas Rangers and director of the Texas Department of Public Safety.

John K. Minnoch, executive director of NHA, said tanners should pay more attention to selling leather at the shoe repair and rebuilding level. "While it is true that a good job is being done in promoting leather at the new shoe level, there is urgent need to distribute wall signs that will convince consumers to demand that leather and only leather be used in repairing their shoes."

1952 GLOVE OUTPUT DOWN 12% FROM 1951

Leather Dress Gloves Show Similar Decline

The production of 26.2 million pairs of gloves and mittens in 1952 was about 12 percent less than the 1951 output of 29.8 million dozen pairs, according to the Bureau of the Census.

Dress and semi-dress glove and mitten production in 1952 of 7.2 million dozen pairs was about 7 percent above the 1951 total of 6.7 million dozen pairs. All-leather dress gloves produced in 1952 totaled 1.2 million dozen pairs, a 12 percent drop from the 1951 output of 1.3 million dozen pairs. However, there was a 28 percent increase in the production of leather and fabric combination dress glove output; these went from 92 thousand dozen pairs in 1951 to 118 thousand dozen pairs in 1952.

All-fabric dress gloves showed a gain of 593 thousand dozen pairs, 5.9 million dozen pairs produced in 1952 as compared with the 1951 output of 5.3 million dozen pairs.

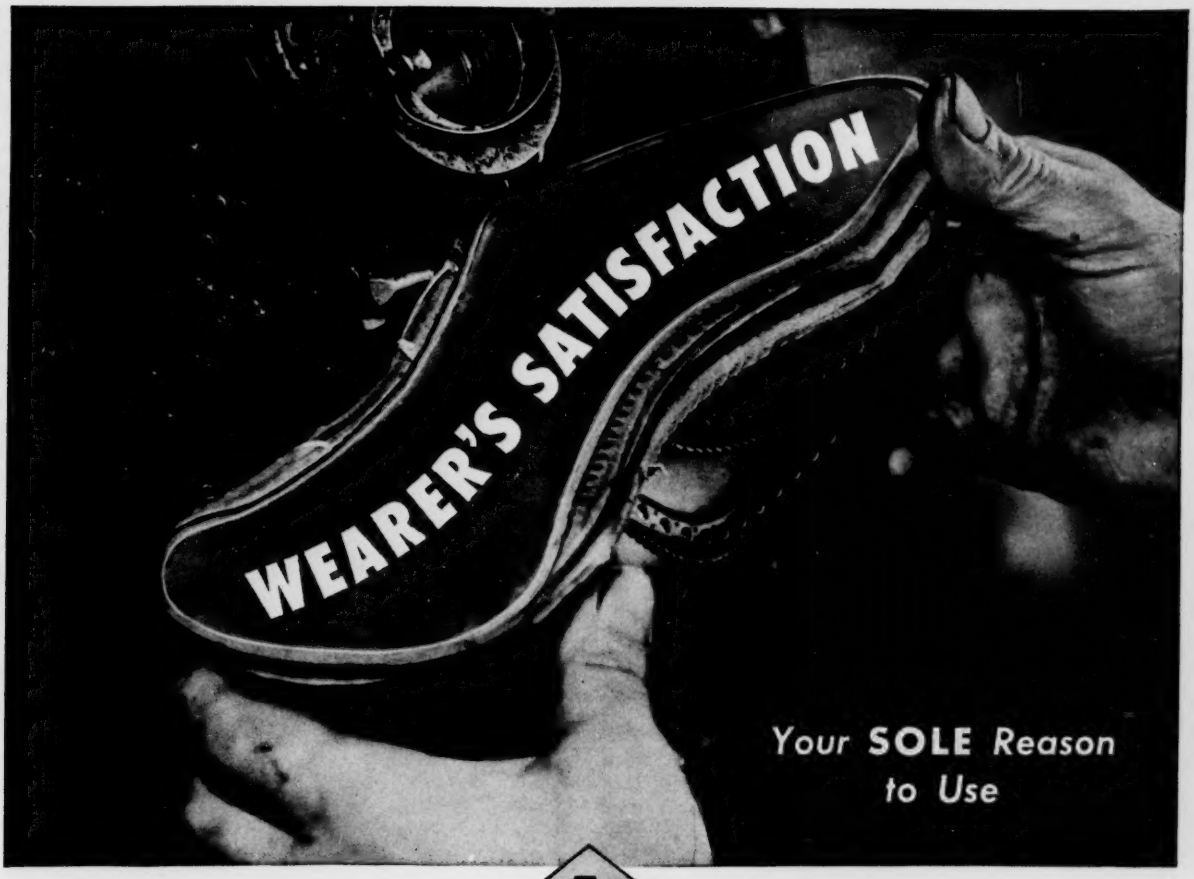
Work glove and mitten output in 1952, 19.1 million dozen pairs, was 17 percent less than the 1951 output of 23.1 million pairs. All types of work gloves and mittens showed a decrease in output in 1951. All-leather work glove and mitten production was down 11 percent; leather-and-fabric combination glove production and all-fabric glove production were both down 18 percent.

ANDREWS-ALDERFER OPENS NEW PLANT

First view of the new plant and home office opened by Andrews-Alderfer Co. at 1055 Home Ave. in Akron, O., shows modern setup for production of "Andal" foam-coated fabrics. Plant has 6400 square feet of office space and 22,000 square feet of factory area. This plus company's original plant area at 120 Ash St., Akron, triples firm's production capacity. The "Andal" process, patented by Andrews-Alderfer, embeds fabrics in latex foam prior to vulcanization. Cloth is inseperably meshed with foam to form a permanent intergration when rubber is cured.

PUTTS AND CHIPS AT WOLLASTON

Pictured above are a few of the more than 200 members of the New England leather and shoe industry who turned out for the Francis C. Donovan Memorial Golf Tournament held June 9 at the Wollaston Country Club. The tournament was sponsored by the Boston Boot and Shoe Club. Left to right: 1. Fred Melea, Otis Murty, Roger Wheeler, Thomas Cuthbert. 2. Joseph S. Lanigan, Peter Hickey. 3. Robert Blackler, John Condon. 4. John Cooney, Fred Moynahan. 5. Leo Larkin, Larry Davis, Maxwell Field, Francis Shea, Fred Abbott, and C. Russell Cavanaugh, committee members with golf prizes. 6. Top: Richard West, T. L. Tewksbury, Jr., Louis Silverman, Gerald Reed, Daniel Keeler. Bottom: R. J. Potvin, Bud Knight, Clyde Rycroft, Jay Scott, F. C. Donovan, Jr. 7. Louis Dinion, Harry Dinion, Frank La Brache, John Rigas. 8. David Price, William Fuller, George Fuller, W. P. Trask. 9. H. J. Esser, Arthur Vietz, Ray Ryan, William Page, Jr. 10. C. Russell Cavanaugh, Francis Shea and F. C. Donovan, Jr., at the buffet luncheon spread. 11. Ray Shaw, Ralph Cary, Arthur Pfeiffer, Richard Langmaid. 12. John Filoon, William Partridge, Jr., Clarence Knapp. 13. Bob Slattery, Jr., Bob Slattery, Sr., and John Slattery. 14. Henry Bufalino, George Hamel, Francis Shea, Charles Slosberg, Clarence Reeder, Maxwell Field.



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NEW USES SEEN LEATHER'S SALVATION

Orr Urges Diversification For Tanners

New uses for leather, coupled with an "open mind" attitude on the part of tanners and continued leather research, can prove a decisive factor in the tanning industry's campaign to expand its market, according to Edgar K. Orr, president and treasurer of Edgar S. Kiefer Tanning Co. of Grand Rapids, Mich.

In a talk delivered "in absentia" at the National Hide Association June 15 in the Shamrock Hotel, Houston, Tex., Orr described his company's efforts to create new markets for leather. Among these, he said, are pigskin leather tiles for covering floors, walls and table tops, leather bedspreads, leather drapes, leather folding doors and leather chairs with pigskin straps.

The Kiefer president described how he took over the business upon his father's death in 1950. At that time, Kiefer plant, machinery and layout were antiquated, the company had no research and development program, employes were getting old, costs rising constantly, and there seemed no future for a young man in the leather industry.

Orr instituted a modernizing program which included hiring of younger men, including a competent chemist; building a laboratory and installing experimental equipment, designing and building modern machines, and giving first priority to ideas for new products.

Result was development of the new leather products and a revitalized business for Kiefer.

Orr added that the Company would like to some day develop a mail-order business on handicraft leather items that can be assembled in the home.

"There are but a few 'New Uses' for leather," Orr said. "When I speak of 'New Uses,' I certainly do not mean to infer that a certain product has never before been made. As Irving Glass, executive vice president of the Tanners' Council, wrote in a recent letter to me, 'New Uses should equally refer to a revitalized concept of how leather can be used against familiar patterns and backgrounds.' "

He went on to point out that leather clothing, because of new designs and excellent promotion, has again gained the prominence in fashion that it merits. New casual shoes are gaining in popularity, leather jewelry is sweeping the country, and leather in furnishings is becoming a fad.

Orr also urged that promotion of leather be tied into the program. He noted the efforts of Leather Industries of America and the Tanners' Council's Upholstery Leather Group in this direction.

He cited LEATHER AND SHOES for a recent editorial suggesting that new sources of raw material be created (see L&S, issue of May 6, 1953). "Why have not more than two percent of the pigs in the U. S. been skinned? Why don't we use a variety of fishskins for raw material, and why not purchase more skins from animals such as kangaroos that are killed primarily for leather than for the food markets of the world. This is your challenge."

CIO LEATHER UNION WINS FRANKLIN VOTE

IFLWU Defeated In Local Election

United Leather Workers, Local 31, CIO, has been revealed as winner of a bargaining agent election held June 12 among production and maintenance workers of the Franklin Tanning Co., Curwensville, Pa., division of Howes Leather Co.

The CIO union drew 118 votes against a total of 40 votes for International Fur and Leather Workers Union, contesting union, in an election sponsored on June 12 by the National Labor Relations Board.

United Leather Workers had represented Franklin workers as bargaining agent since 1950. It was in process of negotiating a wage reopening clause last year when District Council 3 of IFLWU petitioned for an election at the plant.

The company protested that the petition should be ignored until officers of the Council complied with the Taft-Hartley Law by filing non-Communist affidavits. NLRB upheld this ruling and on May 22, IFLWU officers, including Clarence Carr, an admitted member of the Communist Party, filed the affidavits.

The 75 percent margin of votes favoring the CIO dealt IFLWU a severe setback in its campaign to take over as agent of Franklin workers. This represented an increase of 15 percent in votes favoring CIO as compared with a similar election held three years ago when workers voted 102 to 57 in favor of United Leather Workers.

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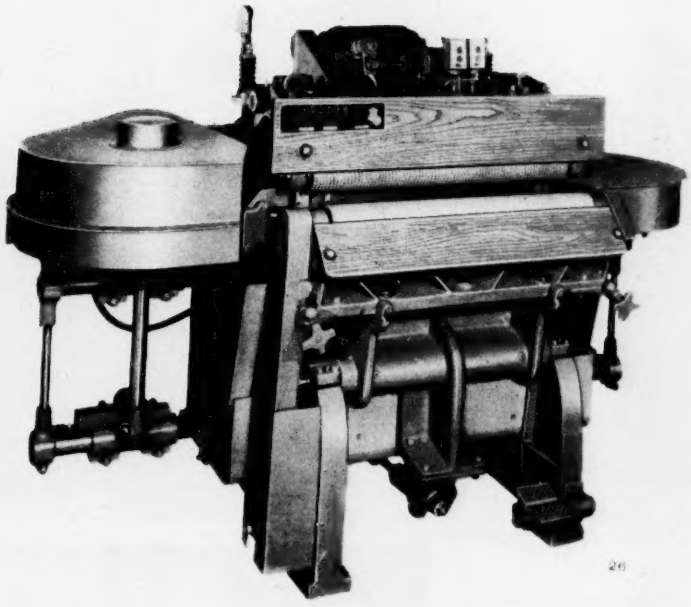

Band
Knife
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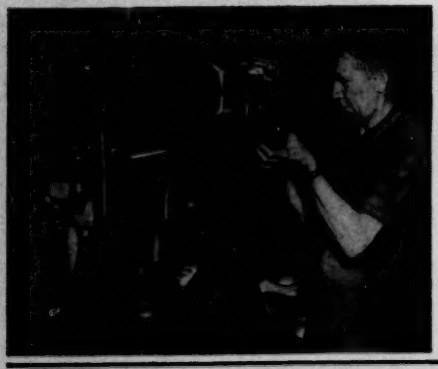
10 New BOTTOMING



1 Goodyear Inseam Sewing Machine — Model B — Improved quality, increased production and ease of operation are its chief features.

2 Goodyear Welt Butting & Tacking Machine — Model B — Automatic pounding and anchorage of entire breastline area, for Goodyear Welt shoes.

3 Goodyear Sole Laying Machine — Model A — A new application in hydraulics makes possible uniform pressure, even with different last heights.

4 Goodyear Outsole Stitching Machine — Model A — Machine speed from 500 to 800 RPM is quickly adjusted to type of work or operator's ability.

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Within the span of five years, 36 new United machines have been introduced commercially to the Shoe Manufacturing Industry. Ten of these machines are designed to meet Bottoming Room requirements.

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UNITED SHOE MACHINERY CORPORATION
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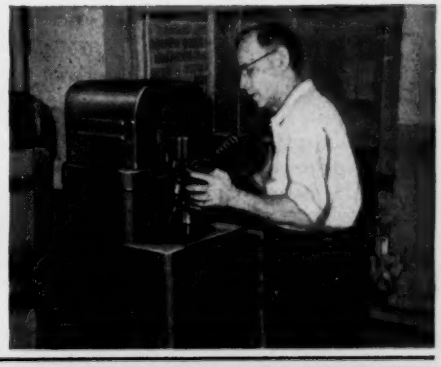
(5) USMC Upper Roughing Machine — Model E — Provides 4 brush shaft speeds, 775, 1225, 1965, and 3100 RPM for use with various materials.

(6) Goodyear Welt Indenting Machine — Model C — Many new features including improved, simultaneous pressure and feed for better quality.

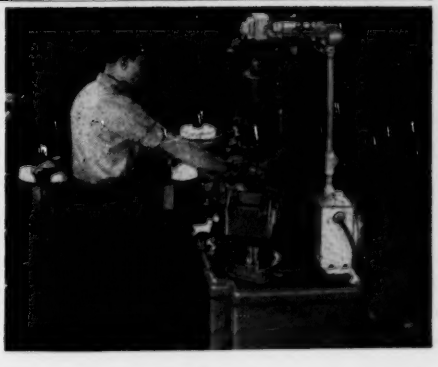


(7) Goodyear Sole Leveling Machine — Model B — Gives operator fingertip control of leveling. No more heavy, tiring foot pressure on the treadle.

(8) USMC Upper Trimming & Tack Pulling Machine — Model B — An improved machine for removing insole tacks, with minimum gouging of insole.

(9) USMC Heel Seat Rough Rounding Machine — Model D — Uses an improved type of cutter to rough trim and rand or bevel.

(10) USMC Cement Sole Attaching Machine — Model C — A versatile, high production two station machine that takes advantage of today's fast-acting adhesives.



Latest rumor in the big merger department has General Shoe Corp. of Nashville, Tenn., taking over I. Miller & Sons, Inc., top women's fashion shoe producer from Long Island City. Report is negotiations now in progress for Miller's manufacturing and retail divisions with Carlisle Shoe Co. not included in transaction. But Miller officials deny deal flatly and General Shoe spokesmen profess no knowledge of anything in fire.

One thing is sure. Neither company welcomes rumor. As merger trend continues, industry's collective nose is sharpened to possible deals, most of which cannot be entirely hidden before completed. The big companies involved in deals find the rumors more than annoying—but can do little more than deny them until an accomplished fact. Company officials say deals are difficult to close satisfactorily once the cat is out of the bag.

Another hot rumor has it that Selby Shoe Co. of Portsmouth, O., one of nation's larger women's shoe producers, will either liquidate or merge with another producer. Selby officials—in particular, executive vice president Phil Harries-Jones—says reports "absolutely untrue and without foundation." Harries-Jones attributed rumors to recent activity in Selby stock "for which there is no plausible explanation."

• •

American Hide and Leather Co. of Boston reported to have reached new agreement with International Fur and Leather Workers Union. New pact, still to be ratified by union membership, provides some sort of pension plan for American Hide employes. In effect, workers get package amounting to 7½-8c of which 5c per hour is contributed by company to pension plan. Also included is additional paid holiday, bringing total to nine annually and $400 life insurance policy for workers. In return, union has agreed to increase in production. Full details not available as yet.

• •

Nothing further on Brown-Regal merger. Negotiations still in progress although reason for delay not exactly clear. Meantime, Brown still holds less than 50% of Regal stock while General Shoe holds close to one-third of outstanding stock.

From all reports, general public now holds very little of Regal stock. Of 512,098 shares of Regal stock outstanding, some 169,321 shares are held by estate of John J. Daly, former president. Brown apparently has somewhat less than 250,000 shares. General, according to Securities and Exchange Commission, which requires that companies list 10% or more of holdings in another firm, has 89,500 shares. Its employes hold another 51,000 shares. This leaves little over 50,000 shares floating in public hands. Good question still is: what will General do with its Regal stock if and when Brown deal is completed?

• •

Mexico's National Leather Association claiming Mexican inventor has invented new tanning method which cuts drying time from six hours to about 15 minutes. Inventor identified as one Jaime Perez Malo.

Malo's new system saving Mexican tanning industry some 12 million pesos ($1,380,000) annually in drying operation alone, Association claims. Also, big tanning countries such as U. S., Germany, Canada and South American countries reported to have experts in Mexico studying Malo's method. No details on method as yet.

• •

Shoes made of wood pulp were among prize exhibits at first exposition of basic materials for industry on view at Grand Central Palace in New York. Idea of exposition, with 84 different companies contributing, was to show new materials that may someday replace conventional materials.

Displays included also new metal hafnium to new plastic with feathers impressed. On hand was Atomic Energy Commission encouraging businessmen to study *peacetime* uses of radioactive materials and Federal Civil Defense Administration with exhibit of atom bomb shelters for homes.

• •

State Department's action in opening trade barriers to Czechoslovakia after freeing of William Oates not expected to result in new influx of Czech shoes here. Legally, Czechs can send shoes here again. Small chance, however, since Treasury Department ruling that all importers of Czech shoes must post anti-dumping bonds equal to 100% of value of shoes still holds.

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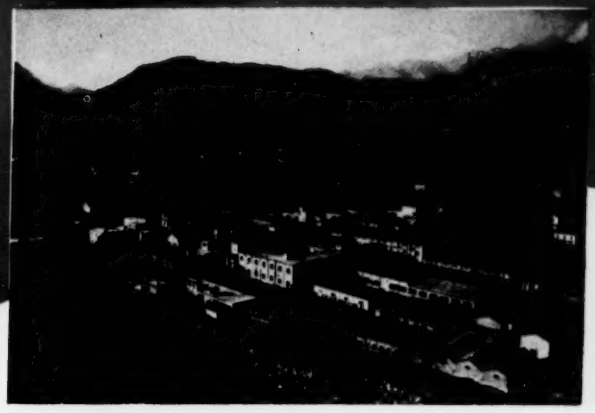

Garressio-One of the 22 Italian plants controlled by Ledoga S.p.A.

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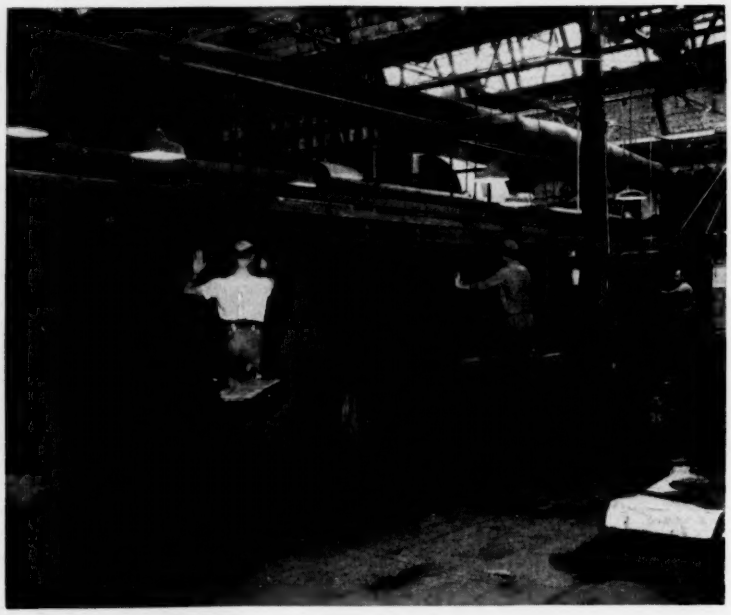

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Stylescope

SHOE FASHION NEWS AND TRENDS

Tasseled moccasins for men, which proved so popular this Spring, expected to do even better in coming seasons, according to a survey by Field & Flint Co., men's shoe manufacturer. Following the tassel will be a one-eyelet shoe which the company feels will be another fashion leader. Trend to slipons is not seasonal one, report states, and average man's shoe wardrobe will soon be incomplete if it lacks pair of slipons.

Black gaining slowly but surely for men. This trend was reported by this page sometime back. But shoes isn't only category where black beginning to enter men's clothing picture. Black entering as fashion color in fabrics and weaves for suits. Accessories being keyed in color to go with black. All this means that men are gradually coming to a re-acceptance of black in their clothing—but black as a fashion color. It also means that black shoes can be promoted as an extra pair of shoes, to be worn with new greys and black-toned clothing items.

For men: no more cold feet. This is the gist of an article in Britain's leading footwear magazine. England has long promoted special cold weather shoe fashions for women. English women have accepted them readily. Recently **Leather And Shoes** presented a report on why cold weather shoe fashions for women would be worth considering for this country (see May 2 issue). And now both Britain and we pose the question: Why not for men?

Men's warm-lined boots and shoes are finding increasing popularity in England. There are many reasons why men have now discovered that it is no more manly to have cold feet than warm ones! The increase of motoring, says the British publication, and the important and too often overlooked influence of such indoor amusements as TV have had an undoubted effect on popularizing footwear which keeps feet warm in winter.

Another important factor is additional style interest and more varied design of warm-lined footwear. Many of these, whether in boots or shoes, fit so well into either formal or informal footwear styles that without looking at the lining it is impossible to tell they are winter warms. This is important selling factor, for it is one with strong masculine appeal. Most men don't like to admit to weakness of having cold feet when it may be apparent in their footwear, but generally prefer their winter warms so well camouflaged that they are imperceptible from their everyday footwear.

Here the boot or shoe with a long, clean vamp line finds favor. For those who prefer more casual style the D-ring with apron front is introduced. Fancy welts are effectively employed on warm-lined footwear, giving a virile look to boot or shoe.

There is a marked increase in the variety of leathers used; waterproof suede appears and grain leather is employed. Color interest is greatly increased; burgundy moves into warm-lined styles; red browns and lighter amber-toned shades predominate, but where light colors are employed a crepe rand gives practical protection for bad weather. As with women's bootees, men's styles follow a low topline just high enough to combine warmth with smartness.

Tie styles take lead, but zip fasteners are also used on a different type of boot. There is great scope for promoting increased sales of men's warm-lined footwear in coming seasons and full advantage should be taken of the wide variety of styles and weights available to tempt men into keeping their toes warm. So reports England.

And what is true of England in this case can also be true of America. Europe in general has made much headway with special styles for cold weather, creating a fourth season, lack of which in this country accounts for widespread dips in production and sales figures. We now have in this country only two seasons in men's shoes. One is a composite Fall-Winter-Spring season and the second a Summer season.

Men's shoe industry did American consumer and itself a great service when it promoted its second, special season —Summer. The hue and cry went up to "take the blankets off your feet." Now, American men breeze merrily through Summer in special casuals, sandals, mesh-type oxfords, etc., blissfully comfortable through the toes.

By the same token, there's no reason that they can't be blissfully comfortable in cold Winter months. Summer and Winter seasons are of about the same duration. If it's worth while for consumer to get special pair of Summer shoes, then it could be made equally worth his while to get special pair of Winter shoes. Comfort is the factor to be stressed, and fashion can help this along with right styles. For Winter, let's put the blankets back on.

Rosalie Manzbanian

LEATHER GLOVE MEN FACE CHANGED MARKET

L&S Editor Says New Sales Approach Needed

As with most industries, the nation's leather glove manufacturers are facing a new kind of competition, a new kind of market, and a new kind of merchandising. Unless they adjust their product and selling to these new conditions they will continue to see a steady sales decline of their product (leather dress glove sales have been cut in half over the past 25 years).

In a talk given by William A. Rossi, editor and assistant publisher of LEATHER AND SHOES, before the annual convention of the National Leather Glove Manufacturers Association, Inc., at Gloversville, N. Y., June 19, Rossi said that "a fresh and imaginative program of promotion and merchandising must be launched if leather gloves are to cash in on their enormous sales potential."

Rossi cited figures showing that only half of all U. S. women own a pair of leather gloves; that of a population of 55 million adult women, only five million buy a pair of leather gloves annually; and only 10 million pairs of leather dress gloves are sold annually to America's 52 million adult males.

"Today in merchandising and selling it's as much a battle of ideas as it is of products—the same as today's wars are fought as effectively with psychology as with guns. Today's selling pace is white-hot, due to increasing pressure of new ideas, new products on retailers and consumers. Industries and products which fail to keep abreast of this intense pace will find themselves squeezed out."

Merchandising Ideas

The speaker gave a number of suggestions for fresh merchandising approaches that might inspire sales. He pointed up the opportunity of new glove leathers such as fishskins; more emphasis on fashion, less on utility; more creative daring in glove designing; selling the glove wardrobe as a packaged kit; more initiative with colors to coordinate with costumes and accessories; fresh use of displays; a retailer educational program, etc. He suggested that practical and inexpensive testing of these and other ideas could be done in a selected "sample city," and the successful trials than applied nationally.

Rossi give especial emphasis to a new form of publicity he termed "news-merchandising," and its opportunities for promoting glove sales. He described this as a specially created form of news that was both informative and entertaining but which at the same time inspired consumer interest in the product discussed—an interest gradually converted into buying action.

New England Group Asks Aid For Tornado Victims

The New England Shoe and Leather Association has issued an appeal to shoe manufacturing members to contribute shoes for victims of the tornado which recently struck Worcester, Mass., and surrounding area.

Men's shoes, both dress and work types, are urgently needed as are women's low-heeled oxfords and casuals. Also needed are children's shoes for ages 1 to 3 and teenagers over 10.

All shoemen are urged to send contributions to American Red Cross, c/o Mr. Edward Gully, Municipal Auditorium, Worcester, Mass. Those who wish can send a check to American Red Cross, c/o Mr. Victor C. Passage, Disaster Headquarters, Worcester.

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GOVERNMENT TO OPEN NEW LEATHER UNIT

Top Industry Leader May Be Named By Weeks

A new leather and leather products division is to be created within the next few weeks, it was disclosed this week by highest Commerce Department sources.

The new unit—to handle hides and skins, leather tanning, shoe and other leather products—will succeed the leather unit of the National Production Authority.

It will be one of 20 industry divisions in the department, set up much as before the Korean War, but with one outstanding difference.

This is, in the words of Secretary of Commerce Sinclair Weeks:

"The chairman of each commodity division will be an outstanding industrialist recommended by his industry and serving full time without pay on a six-months rotating basis.

"He will be assisted by a capable deputy from the federal career service."

While the Secretary did not specifically state that leather and leather products would be one of the 20 divisions, information officers of the department confirmed this fact to LEATHER AND SHOES.

Placing of industrial executives at the head of government units, except in times of war or other emergency, is highly unusual. Observers attribute the planned action to the desire of the new administration to cooperate with business.

Who from the leather industry or any of its related fields is to be named chairman of the new unit, assuming Congress agrees to the Secretary's plan, is yet to be seen.

Schnitzer Favored

The speculation, heard in shoe manufacturing industry circles, as well as in government, is that Julius G. Schnitzer, a career government official, will be recommended by many in the leather industry for the top post.

Schnitzer, who has been 30 years with the government, nearly all that time in the field of leather and leather products, has been head of Commerce's leather division for years, and now is head of the leather division of the NPA, also part of the Commerce Department.

"This arrangement," said the Secretary, "will give the public the benefit of the broad experience and talent of outstanding business leaders in advising measures to maintain the current record prosperity or to meet whatever adjustments or emergencies which may arise later."

A list of six functions—adding up to a larger voice for business—was outlined for the new divisions by the Secretary.

They include:

1 — Continue allocations of materials, where needed, for military programs.

2 — Supply industry with information.

3 — Obtain industry cooperation in a mobilization base and post-attack program. For this, "industries themselves will obtain required data for the government."

4 — Keep up-to-date industry organization plans for crisis . . . for immediate use in the event of general war or grave emergency.

5 — Serve as "authoritative voice of industry" in giving opinions to the executive branch and to Congress.

6 — Place business in a position where it can "approve or disapprove of the implementation of such policy and plans" but not to "dictate" government policy.

The New Boston HOT-MELT SPOTTING MACHINE

DESIGNED exclusively for the application of the new hot-melt spotting cements—for attaching wood, steel or fibre shanks; for spotting heel tucks; for spotting platforms to split wood heels; for attaching dutchman and many other uses.

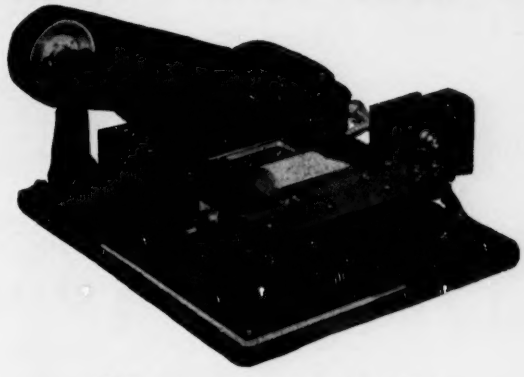
Fast, safe, clean and economical, this new machine has these features:

Motor does not start until the melt is at workable temperature.

Bearings are all inside and are self-lubricated.

Sensitive thermostatic control holds the melt at correct operating heat level.

Aluminum fins deliver heat rapidly and uniformly to the body of the melt.



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210 GOLF OUTING SET FOR JULY 29

The 13th Annual Golf Tournament of The 210 Associates, Inc., philanthropic organization for the leather, shoe and allied trades, will be held Wednesday, July 29, at the Woodland Golf Club in Auburndale, Mass.

Mortimer Weiss of Cooney-Weiss Fabric Corp. and Myer Saxe, Kesslen Shoe Co., co-chairmen of the event, report that a new feature of the tournament will be award of the Paul Revere Silver Bowl given by Armstrong-Norwalk Rubber Co. to the member in Class C (21-30 handicap) who cards lowest net score in the division. The winner will hold the large cup for one year and will then receive a miniature cup for permanent possession.

In addition, the Abraham Shapiro Memorial Cup, donated by the *Boot and Shoe Recorder*, and the Gold Trophy given by the *Shoe and Leather Reporter* will be awarded low net winners in Class A and Class B respectively.

More than 40 other prizes will be awarded in a Shawnee tournament, including leather luggage, electric razors and golf shoes donated by various firms. Starting times will be reserved.

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SURVEY ON WHY PEOPLE USE LEATHER

Phillips Reports To Leather Chemists

The age of the mass production of footwear is meeting an era of the mass production of synthetic materials. In Great Britain this is giving rise to much discussion in our leather industry, and the British Leather Manufacturers' Research Association, of which the author is Director, has been asked to survey the problem. In this he has been helped by a knowledge of the wool industry, in which the same problem has arisen.

The survey has shown that there are few people in our industry who can give a rational explanation why leather is used for footwear and clothing. The scientist has for many years studied the physical properties of leather, but has applied this knowledge almost with reluctance to the question of foot comfort.

The tanner associates the study of physical properties with standardization, with which he is not in agreement. He does, however, collaborate with the shoe manufacturer, and the result has been that leather is produced to suit the shoe factory rather than to give service and comfort to the shoe wearer. Even the educated and well-informed wearer is now without any knowledge of the properties of leather, and is unaware of the fundamental differences between leather and synthetic materials.

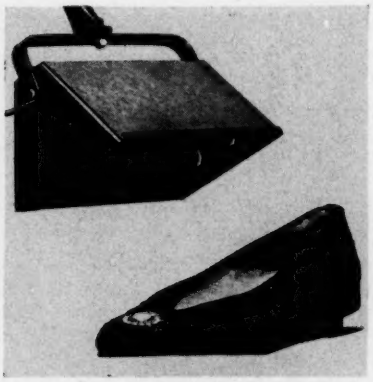
The author illustrated his observations by reference to published work on the properties of leather and other fibrous materials. He also referred to experiments on soling materials in wear, and to a comparison of the properties of typical Amercian and British bottom leathers.

Black Light Aids Output Of Embroidered Shoes

The light fantastic touch in the new embroidered shoes being introduced by such companies as Vogue, Sbicca and Lilly Ann can be credited to "black light" as well as to the delicacy and intricacy of the patterns.

According to the Marvel Embroidery Company, of Los Angeles, which is doing the embroidering of these shoes, black light is being used to increase production to meet consumer demand.

Patterns now are chalked or sprayed on with fluorescent marking media which is invisible under ordinary light, thus eliminating removal of the marks after embroidery is com-



pleted. Special ultra violet fixtures which can be used under ordinary factory light have been mounted on sewing machines so that markings stand out and can be followed with remarkable ease and rapidity by operators.

System was worked out by Ultra Violet Products, Inc., of South Pasadena, and has proved so successful in saving time and labor that it is now being used for all work which includes embroidery on men's sportswear and women's and children's wear.

Donnell & Mudge Ltd. "Far From Out"

Philip J. Duggan, president and general manager of Donnell & Mudge, Ltd., New Toronto, Canada, tanner of sheep and goat leathers, reports that while the company has been experiencing "a little rough going," it is still "in there pitching" and expects to continue so for a long time to come.

Commenting on an item published in the June 6 issue of LEATHER AND SHOES reporting the company in difficulties, Duggan said the entire light leather industry in Canada has been having its troubles in the last couple of years. "But we are still here, we are operating, and while our staff is cut down, we are running a full five-day week with the staff we have employed," Duggan stated.

"While I am comparatively new in the leather business, as you know," Duggan said, "I am told by 'old timers' that it is seldom that the leather business gets actually knocked out, and our company is not knocked out to say the least."

Plant and offices of Donnell & Mudge, Ltd., will be closed for vacation period from June 26 to July 13 with all orders on hand required for delivery shipped before June 26. Production and shipping will be resumed July 13.

Zeller's Sons Liquidates Business

G. F. Zeller's Sons, Inc., Buffalo tanner of sole leathers, is reported in process of liquidating. The company, which has been producing sole leathers for the past 38 years, is understood to be offering its plant at 815 Smith Street for sale.

For 73 years the name of MARDEN has stood for PROGRESS in the production of better oils for the tanning industry.

Today the third generation offers the experience of the past coupled with constant experimentation and research to help make your leather better and more saleable.

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SOLE LEATHER BANE TO IFLWU

International Fur and Leather Workers Union, long regarded as most influential union in the tanning industry, is now a minority union in the sole leather industry.

This is the statement of John Radzyminski, CIO United Leather Workers organizer, made during a radio address, June 11, at Clearfield, Pa. Radzyminski delivered his address during the bargaining agent contest between IFLWU and the CIO. The CIO was returned a winner in the National Labor Relations Board election by a wide majority.

The CIO organizer said IFLWU has lost over 3,000 members in the past five years in such plants as Endicott-Johnson Corp.; the former Keystone Tanning & Glue Co., subsidiary of United States Leather Co.; the liquidated American Oak Leather Co., of Cincinnati; Michigan Tanning and Extract Co., Boyne City and Petoskey, Mich.; West Hickory Tanning Co., of West Hickory, Pa.; Eberle Tanning Co., of Westfield, Pa.; the closed tanneries of Armour Leather Co., in Pennsylvania; Alpena Tanning Co., of Alpena, Mich.; and Charles S. Walton & Co., of Baltimore, Md.

Radzyminski added: "At the present time the Fur and Leather Workers Union has representation rights left at only a handful of companies employing less than 1,500 workers. The Fur and Leather Workers have never been able to organize such large plants in the sole leather industry as the Elkland Tanning Company in Elkland, Pa., employing close to a thousand workers.

"Actually, the Fur and Leather Workers today represent less than half the workers in the sole leather industry."

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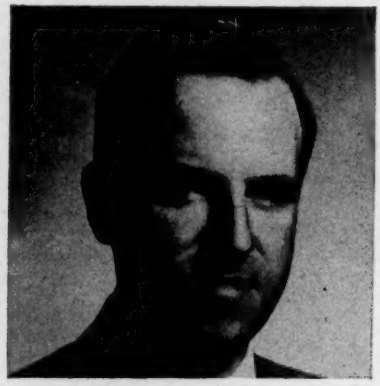


Samuel Rubin, an employe of Colonial Tanning Co., Boston, since 1932, who has been promoted to a vice presidency. Rubin began his career with Colonial as a clerk 21 years ago and has served as sorter, general superintendent and sales manager of the Velka side leather division. He is a veteran of World War II.

NEW FILLER FIRM

Edward G. Suffern of Johnstown, N. Y., has announced purchase of the Cataract Chemical Co.'s filler business for sole and upper leathers and organization of the Suffern Chemical Co. in Johnstown. Suffern was formerly associated with Stepan Chemical Co. in Chicago. Cataract Chemical Co. was located in Buffalo.

William Brown To Rejoin Leather Firm

William C. Brown, who resigned on June 1 as Secretary of Welfare of Pennsylvania, has announced he will resume his position as an active partner in the William C. Brown Leather Co., Philadelphia tanner of industrial leathers.

William C. Brown Leather Co. is planning to expand its activities to include new products and a larger field of distribution, Brown said.

MILITARY BIDS AND AWARDS

Black Leather Oxfords

June 19, 1953—TAP-30-352-53-775—195,004 pr. low quarter black oxfords for delivery in three equal installments during September, October and November. Opening, New York, 2 P.M.; this procurement for the U. S. Navy. This invitation is NOT limited to small business concerns.

Men's Oxfords

June 22, 1953—TAP-30-352-53-780—78,892 pr. shoes, dress, man's, oxford, leather black; 100% domestic pack; delivery 39,462 pr. during November and 39,430 pr. during December; FOB origin; opening New York, 1 P.M.; this procurement for the U. S. Air Force.

McELWAIN LOW BIDDER

J. F. McElwain Co., Nashua, N. H., was low bidder at the opening of TAP-30-352-53-704 calling for: 1) 480,120 pr. of mildew-resistant russet service combat boots for the Army, regular tariff sizes. McElwain offered 100,000 pr. at 6.82 per pr. 20 days acceptance, net.

Item 2, under the same invitation called for 9,888 pr. of supplemental tariff sized combat boots, and the low bid came from John Addison Footwear, Inc., Marlboro, Mass., which offered all at 7.95; 60 days acceptance, 1/10 of 1% in 20 days. Six other bids were received:

General Shoe Corp., Nashville, Tenn.; 1) 50,000 pr. 7.40; 20 days acceptance, net.

E. J. Givren Shoe Co., Inc., Rockland, Mass.; 1) 20,000 pr. 8.55; 60 days acceptance, net.

John Foote Shoe Co., Brockton, Mass.; 1) 36,000 pr. 8.65; 60 days acceptance, net.

Allen Squire Co., Spencer, Mass.; 1) 20,000 pr. 7.79; 20 days acceptance, 1/10 of 1% in 20 days; 20% in 30 days.

International Shoe Co., St. Louis, Mo.; 1) 100,000 pr. 7.39; 20 days acceptance, net.

Holland-Racine Shoes, Inc., Holland, Mich.; 1) 5,000 pr. 7.89; 60 days acceptance, net.

ADDISON BIDS LOW

John Addison Footwear was low bidder under ASTAPA invitation TAP-30-352-53-705—also for combat boots — item 1) which called for 1,763,856 pr. regular tariff sizes, offering to supply 20,000 pr. at 6.65; 40,000 pr. at 6.75; and 20,000 pr. at 7.00.

Item 2 was for 225,672 pr. of supplemental tariff sizes and the low bidder was A. S. Kreider & Son Co., Palmyra, Pa. The firm offered 18,000 pr. at 7.21; 20 days acceptance, net. There were sixteen other bidders.

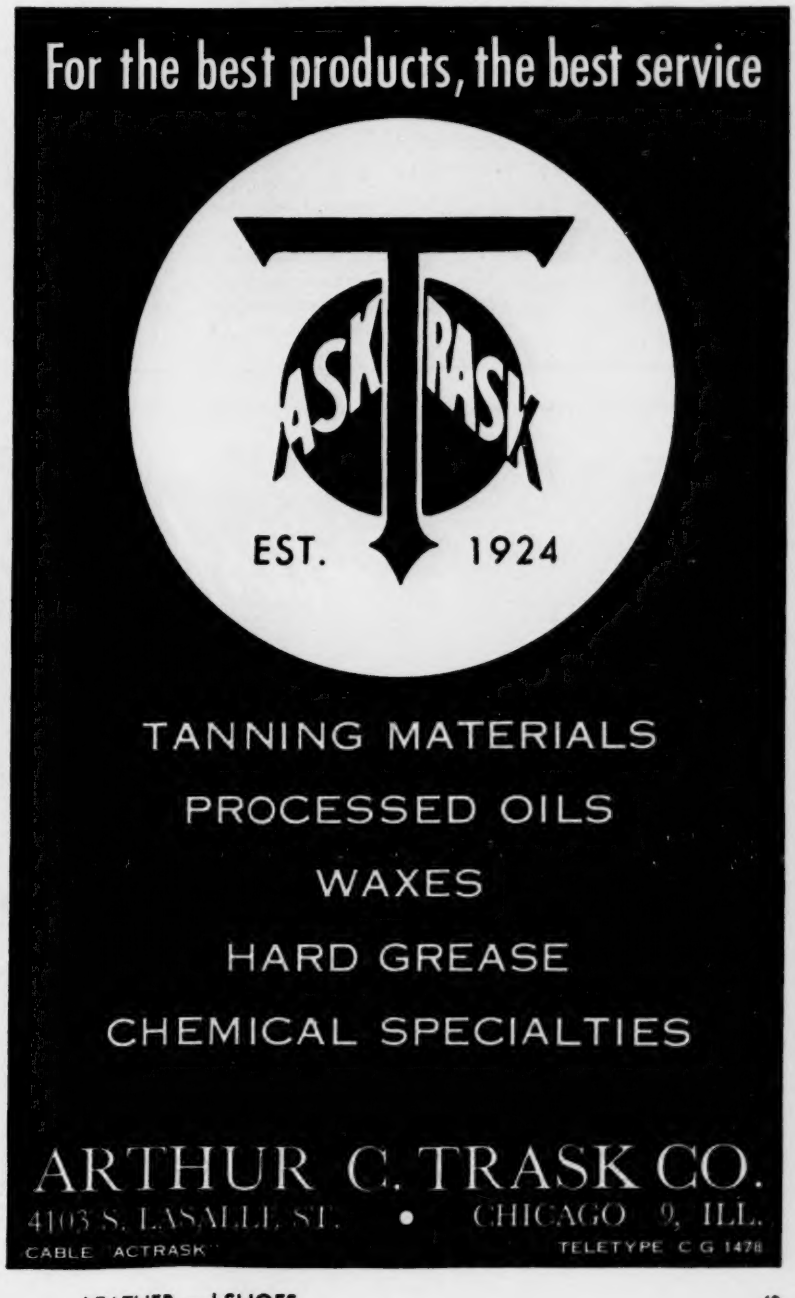
AWARD OXFORDS

Hanover Shoe, Inc., of Hanover, Pa., and Endicott-Johnson Shoe Corp., of Endicott, N. Y., were awarded contracts by the Armed Services Textile and Apparel Procurement Agency under Invitation TAP-30-352-53-712 covering mildew resistant, low quarter tan shoes.

Hanover was awarded 51,552 pairs at $4.98 per pair, dollar value of $256,728.96. Endicott-Johnson will make 16,392 pairs at $5.55 per pair, dollar value $90,975.60.

LAGANAS WINS AWARD

Chris Laganas Shoe Co. of Lowell, Mass., has been awarded contract for 11,762 pairs of women's black dress oxfords under ASTAPA-30-352-53-727. Award was made on basis of the company's low bid of $5.23 per pair. Total dollar value is $61,515.26. Procurement for the Air Force.



• **A. B. Browne** has resigned as president of Bourbeuse Shoe Co., division of Brown Shoe Co., and has joined Fashion-Bilt Shoe Co. of Pontiac, Ill. He will act as sales manager and stylist.

• One hundred and eleven years of service to the leather industry were represented recently at the Francis C. Donovan Memorial Golf Tournament in Wollaston, Mass., when **Frederick Martineau** and **George L. Runey** sat down to enjoy the club's famed buffet lunch. Martineau has 55 years in the industry and Runey only 56.

• **Morton Jones** has succeeded William A. Lawson, recently retired as leather buyer for Selby Shoe Co. of Portsmouth, O. Jones has been in charge of cutting and production at Selby.

• **R & A Leather Finish Co.** of Brooklyn reports that Gady Krumholz, chief chemist of R & A de Mexico S.A. of Mexico City is now visiting the United States for five weeks training in the preparation and uses of leather finishes. He will study at the R & A plant and laboratory.

• **Ernest Lazarus** has joined Chilewich Sons & Co., New York hide and skin broker and importer.

• **J. Robert Bonnar** has been appointed sales manager, Dyestuff Division, General Dyestuff Corp.; **Henry F. Herrmann,** general market manager of the Division; and **Donald E. Marnon,** manager, Dyestuff Technical Department.

• **Ed Vollbrecht, Jr.,** has been appointed Milwaukee-Chicago sales representative for International Fabric Corp., Boston shoe fabric manufacturer. Vollbrecht also handles the

lines of Plymouth Rubber Co., Baxendale Cut Sole, Beadenkopf Kid Tanning Co., and A. H. Ross & Sons. His new offices are located at 7530A West State St., Milwaukee.

• **I. Hoffenberg** of A. Werman & Sons, Inc., has been re-elected chairman of the Stitchdown Shoe Manufacturers Association in New York. Re-

elected vice president is **Gerard A. Burke** of Ramsey Shoe Corp.; **Leon Abbey** of Accurate Shoe Corp. was elected first vice president; **Samuel G. Dones** of Prudential Shoe Mfg. Co., Inc., second vice president; **Leon D. Fischel** of Comfort Sandal Mfg. Co., treasurer; and **Abraham Weinman** of Five Star Shoe Co., secretary.

• **Dr. Paul M. Goodloe** has been named assistant director of the research and developmental department of Brown Co., Berlin, N. H., manufacturer of innersoles and other products.

• **Harold Miller** of A. F. Gallun Corp. has been elected president of the Wisconsin Tanners Production Club for the 1953-1954 season. He succeeds **Robert Lotz** of Albert Trostel & Sons. Other officers elected were **Clarence Jensen** of Midwest Tanning Co., vice president; and **Harry Wilson** of B. D. Eisendrath Tanning Co., Racine, Wis., secretary-treasurer.

• **Robert Bowen** has been named fitting room supervisor at Selby Shoe Co., Portsmouth, O. He succeeds **W. G. McCormack** who has resigned.

Deaths

Arthur W. Hunt

. . . 63, *leather executive,* died Friday, June 12, at Boston City Hospital after a brief illness. A resident of Boston, he was manager of the sheepskin division of A. C. Lawrence Leather Co. of Peabody. After serving as a captain in the U. S. Army during World War I, he joined the leather firm and remained with it until his death. From 1927 to 1937, he was managing director of Lawrence Leathers, Ltd., the firm's English subsidiary. He leaves his wife, Margaret T.; two sons, John and Harry; a daughter, Mrs. Vernor Nelson; a granddaughter, and Albert F. Hunt, former president of A. C. Lawrence Leather Co.

Albert P. Cox

. . . 83, retired *leather executive,* died June 11 in Shreveport, La., after a long illness. A former resident of St. Louis, he was manager of the St. Louis office of The American Oak Leather Co. until his retirement in 1941. He moved to Shreveport after his retirement. Surviving are his wife, Anna; and two sons, Albert H. and Lt. Col. John Cox; and a daughter, Mrs. Helen Leary.

Theodore Moreno

. . . 81, retired *shoe executive,* died June 9 at his home in Clayton, Mo. He was formerly a vice president of International Shoe Co. in St. Louis and was very well known throughout the shoe industry, particularly in the midwest. He retired in 1928 after having been associated with the firm for 27 years. Surviving are his daughter, Mrs. Edward G. Bisdoff, a sister and two grandchildren.

Abraham Payes

. . . *shoe executive,* died June 7 in Philadelphia after a short illness. Well-known throughout the shoe and leather industry, he was a partner in Payes Shoe Co., Philadelphia wholesaler of youths', boys' and little gents' shoes.

Robert E. Meurling

. . . *shoe executive,* died June 15, in Brockton, Mass., after a long illness. A veteran of the shoe manufacturing industry, he had been employed as a foreman at Stetson Shoe Co., South Weymouth, Mass., for 25 years before his retirement several years ago. Surviving are his wife and two sons, Marcus R. and Alfred R.; two daughters, three grandchildren, a sister, and several nieces and nephews.

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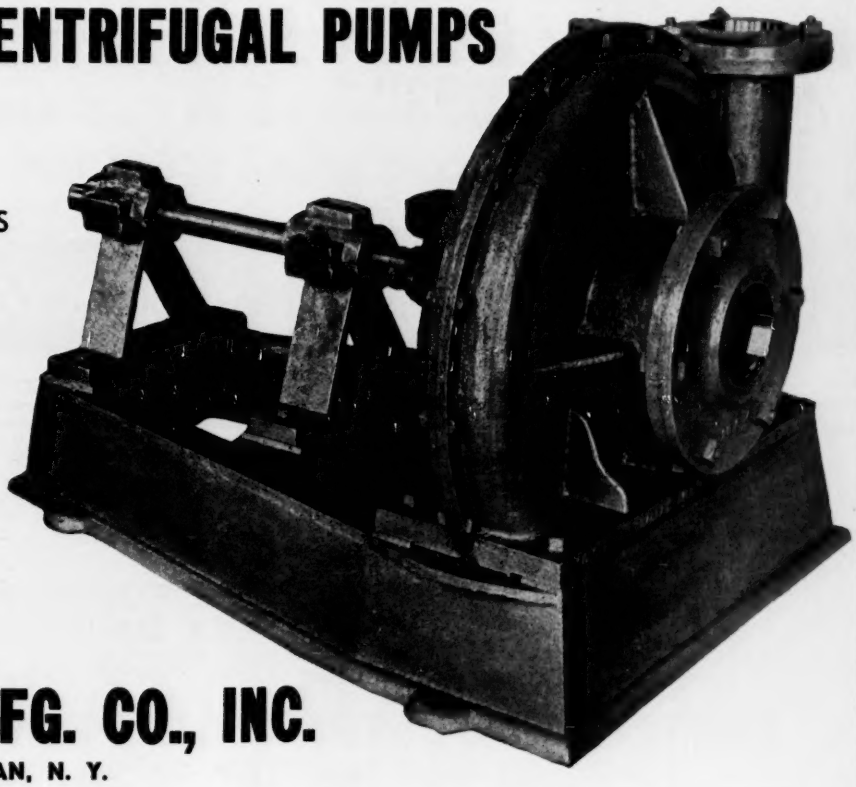

CARLEY MFG. CO., INC.

OLEAN, N. Y.

APRIL SHOE OUTPUT SHOWS 4% INCREASE

Most Categories Show Gains Over Year Ago

Production of footwear in April 1953 totaled 44,968,000 pairs, eight percent less than the 48,723,000 pairs produced in March 1953 but four percent above the 43,082,000 pairs reported in April 1952, the Census Bureau reports.

Preliminary figures list women's shoe, sandal and playshoe output at 20,765,000 pairs, 10 percent below March figures of 22,945,000 pairs but two percent above April 1952 figures of 20,363,000 pairs.

Men's shoe output in April totaled 8,979,000 pairs, a decline of two percent below the 9,125,000 pairs of March but four percent above the 8,613,000 pairs reported in April a year ago.

Other gains were reported in the following categories: misses', 14 percent below March 1953 but six percent above last April; infants', 12 percent below March and 12 percent above April 1952; babies' unchanged from March 1953 but five percent above April last year; athletic shoes, five percent above March and 29 percent above April; and slippers for housewear, five percent above March and 17 percent above April.

Only declines were reported in children's footwear, down 19 percent from March and one percent from April; and other footwear, off 30 percent from March and 34 percent from April.

Actual housewear slipper output totaled 4,271,000 pairs, five percent above the 4,059,000 pairs of March 1953 and 17 percent above the 3,647,000 pairs of April 1952.

Footwear shipments in April totaled 43 million pairs, valued at approximately $156 million, an average value per pair shipped of $3.64. In March 1953, average value per pair shipped was $3.70 and in April 1952, it was $3.64. Following are comparative figures:

SHOE PRODUCTION ANALYZED

Kind of footwear	Production (thousands of pairs) April 1953	March 1953	April 1952	Percent of change April 1953 compared with— March	April
Shoes and slippers, total	44,968	48,723	43,082	— 8	+ 4
Shoes, sandals, and playshoes	40,193	44,079	38,879	— 9	+ 3
Men's	8,979	9,125	8,613	— 2	+ 4
Youths' and boys'	1,474	1,622	1,369	— 9	+ 8
Women's	20,765	22,945	20,363	—10	+ 2
Misses'	2,896	3,374	2,732	—14	+ 6
Children's	2,540	3,153	2,560	—19	— 1
Infants'	2,291	2,614	2,052	—12	+12
Babies'	1,248	1,246	1,190	.....	+ 5
Athletic shoes	279	265	216	+ 5	+29
Slippers for housewear	4,271	4,059	3,647	+ 5	+17
Other footwear	225	320	340	—30	—34

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ABSTRACTS

(Concluded from Page 19)

"Tannin Analysis Method—Problems and Modifications"

By Martin Baum, R. C. Camp and J. Richter Salvesen,
Marathon Corporation

Lignosulfonate tanning materials, bisulfited vegetable tans, and, to a lesser extent, ordinary vegetable tans replace sulfate groups in chromed hide powder. This is indicated by a higher sulfate content in the nontan solution than is present in the analytical strength tan solution. As a result, the calculated tan uptake is too low unless proper correction is made. A practical procedure which eliminates or compensates for the transfer of anions from the chromed hide powder to the nontan solution is essential for accurate tan analysis.

When 5 minutes in the Waring Blender is substituted for the shaking procedure in the ALCA tan analysis method, lignosulfonate tanning materials are almost completely exhausted as shown by depletion of methoxyl in the nontan. A more factual value for uptake of such tan material by hide substance is obtained. When used for vegetable tans, the Waring Blender modification gives the same results as the standard ALCA method, but presents a more convenient technique.

"Canaigre Root Tannin Makes Serviceable Leather"

By C. W. Beebe, W. S. Kip, W. F. Happich and J. S. Rogers—
Eastern Regional Research Laboratory

Previous work on canaigre is briefly reviewed. A practical wear test made by about 65 mail carriers in the Philadelphia district is described. For this test, 16 bends were tanned in the laboratory by a blend containing, on a tannin basis, 50% canaigre, 25% chestnut and 25% quebracho tannins. The 16 bends from the opposite sides of the same hides were tanned by a commercial tanner with a normal tanning blend. Soles cut from these bends were paired by matching each sole with one cut from a corresponding position on the opposite bend. The soles were made into shoes to fit the individual wearers. Each carrier kept a record of time and mileage. When one sole was worn through the shoes were resoled, reversing the positions of test and control soles. The results show the relative wear of the two types of leather.

"Reactions of Vegetable Tanned Leather"
II—With Higher Aldehydes and Organic Polymers

By Seymour S. Kremen, Blaine L. Lucas, Jr. and
R. Lee Southwood, University of Cincinnati

The reactions of vegetable-tanned leather with formaldehyde have previously been studied. These reactions greatly improve the chemical and thermal stability of the leather, for such purposes as insole serviceability and other requirements where area stability under repeated wetting and drying or prolonged severe heating.

The use of dimethylol urea in place of formaldehyde is shown to be beneficial in all respects. In addition bifunctional aldehydes such as glyoxal and pyruvic aldehyde, and aldehydes in combination with polymeric systems like polyvinyl alcohols offer interesting theoretical reaction possibilities with hide substance and vegetable tannins. Data is presented to indicate the reactivity of these materials wth vegetable tanned leather and to assess the properties of the resulting leathers.

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WESTFIELD,
PENNA.

SEASONAL SLOWDOWN KEEPS LEATHER PRICES LEVEL

Not Enough Business To Affect Prices Despite Easing Hide Market

NEW YORK MARKETS

Upper Leather: This week another slow one. Tanners have plenty to do, however, in filling the backlog of orders on sides and calf but they have not found much in the way of new business. Prices very firm with tanners sticking to lists but there is plenty of price resistance.

On elk large spread sides lists firm at 46-42c and down and on combination tannages around 48c and down.

A lot of tanner representatives are getting into the garment leather business, selling grain leather to replace the lack of horse for garment. Some garment people say that when they call a tanner for horse leather they are told they will have to get on the waiting list. Prices on this side leather for garments said around 46c and down with some tanners making a leather selling in the lower 50's and down.

Sheep cape leather for garments is also in demand but suede not as active as it was. Prices very firm 35-34c and down or so.

Patent leather remains active for export and for juvenile with even some interest shown by some women's manufacturers. Some tanners say they find gun metal grey patent a good seller in women's.

Sole Leather: Prices very firm with bends 10 iron and up 56-58c and a lot of good tannages not below 58c, 9/10 iron bends usually 60-61c and though some are below 60c, they are not the best tannages.

Double rough shoulders still quiet. up. In fact some of the big men's belt manufacturers who get started early have placed some important orders already. Double rough shoulders about 54c down to 46c as to weight. Bellies continue very well sold up and firm at 28-30c for cows and steers. Heads and shanks firm with 20c maintained on heads.

BOSTON

Sole

Boston sole leather tanners find little doing this week as vacation season approaches. Many shoe factories are already working on staggered vacation schedules. Easing hide market has little effect on leather prices since not enough leather is sold.

Tannery run bends bring 57c and down for 10 iron and up; 60c and

Prices and Trends of Leather

KIND OF LEATHER	THIS WEEK	MONTH AGO	YEAR AGO	1952 HIGH
CALF (Men's HM)	85-1.15	85-1.15	70-98	85-1.10
CALF (Women's)	75-99	70-99	67-85	80-1.03
CALF SUEDE	75-1.10	75-1.10	80-90	85-1.10
KID (Black Glazed)	75-90	75-90	75-90	75-90
KID SUEDE	80-96	80-96	80-95	80-96
PATENT (Extreme)	55-60	54-59	38-45	56-60
SHEEP (Russet Linings)	18-32	18-32	17-28	18-32
KIPS (Combination)	60-64	58-62	48-56	56-60
EXTREMES (Combination)	51-55	52-56	46-52	54-56
WORK ELK (Corrected)	39-43	38-42	35-45	38-46
SOLE (Light Bends)	68-72	68-72	65-68	68-72
BELLIES	27-29	27-29	24-26	26-27
SHOULDERS (Dble. Rgh.)	52-56	52-56	50-55	50-55
SPLITS (Lt. Suede)	33-39	33-39	30-36	35-39
SPLITS (Finished Linings)	18-22	18-22	18-20	24-26
SPLITS (Gussets)	13-15	13-15	16-18	18-20
WELTING (½ x ⅛)	8	8	7½	8
LIGHT NATIVE COWS	19-19½	19½	16¼-17¼	20

All prices quoted are the range on best selection of standard tannages using quality rawstock.

down for 9/10 irons, 66-65c and down for 8/9 irons and 72c and below for light bends.

Sole Offal Mixed

Some business in bellies and double rough shoulders but not much doing otherwise, say Boston sole leather offal tanners and dealers.

Cow bellies listed at 29c and down; better sales 28c and down. Steer bellies same at 28-27c. Not too much doing except for quick delivery. Tanners well sold ahead. Single shoulders fair at 37-42c for lights, 32-37c for mediums. Double rough shoulders 56c and down for lights, 53c and below for mediums. Heads still 16-18c, hind shanks 20-22c.

Calf Quiet

Little doing in Boston calf leather market this week.

Women's weight smooth calf lists generally at 99c and down with best interest in high 80's and down. Men's weights generally $1.18-$1.17 for top grades; interest at $1.00 and down. Suede holds at $1.15-$1.10 and down for black; colors 5c more.

Sheep Slow But Steady

Not much doing in Boston sheep leather market except for garment leathers which still enjoy phenomenal run. Boston tanners report market run.

Hat sweat fair at 30, 28 and 26c generally. Some tanners ask 1c more. Russet linings bring 23c and below. Boot linings 27-26c and down. Colored vegetable linings at 27c for regular colors; 28c for fancy colors. Chrome linings only fair at 30c and down. Some lists at 31c.

Sides Lag

Prices unchanged as hide market eases. Combination-tanned extremes 55c and below for HM weights; larger spread 51c and down in HM. Vegetable-tanned extremes 54-52-50c. Large spread elk 48c and below. Work shoe elk 39-43c, work shoe retan 46, 45c down to 42-41c.

Kip sides still find interest. Combination HM's listed up to 65c although interest below this. Full-grain vegetable kip sides 75-73-71c and down. Corrected vegetable kips hold at 64-62-60c and below.

Patent Moderate

Some business in patent leathers but edge of market absent with approaching vacations. Prices as before: Large patent listed 45-38c; patent extremes 60c and down; patent kips 73c and below.

Splits Slack

Not much doing in Boston splits market. Prices remain as in recent weeks. Heavy suede splits 44-42, 39; light suede splits 39-37-35c. Lining splits 22-17c, gussets 15c and down. Flexible innersole splits 28-23c for lights, 37-32c for heavies. Naturals 36-29c for H weights, 25-20 for M weights.

Kid Slackens

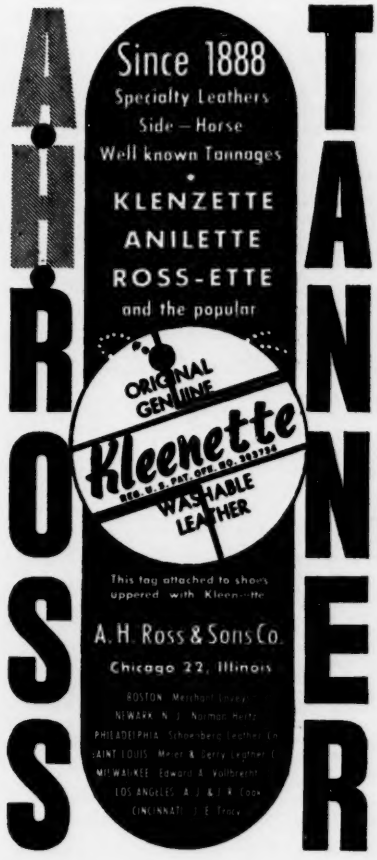
Kid leather tanners in Philadelphia say business, while fairly good, has slackened down slightly this past week.

Black suede did rather well this past week, with emphasis on the low to medium grades. Not much reported about glazed. Little mention of colors—even browns did not come into the picture.

Linings continue to go quite well. Nothing new in slipper leathers and nothing in crushed. Satin mats considered by most tanners as absolutely dead.

Average Kid Prices

Suede 32c-96c
Linings 25c-55c
Crushed 35c-75c
Glazed 25c-$1.00
Slipper 25c-60c
Satin Mats 69c-98c



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GEBHARDT-VOGEL TANNING CO.
706 W. OREGON ST., MILWAUKEE

Sole Leather

Prices more or less as quoted past two weeks—with a slight drop of 1c or 2c in some instances.

The No. 1 medium weight factory bends remain at 63c. However bellies, while quoted at 30c, are selling for a cent or two lower. Heads down to 16c and findings, when sales are made, go at 63c.

Belting Slower

Belting leather tanners of Philadelphia say business has definitely eased off a bit this past week.

Butt bends quoted at $1.09 for No. 2 extra light, $1.04 light and 96c medium. The No. 3 lights remain at 99c and medium 91c. Shoulders quoted at 87c for No. 1 light and medium, 55c ex. heavy.

AVERAGE CURRIED LEATHER PRICES

Curried Belting	Best Selec.	No. 2	No. 3
Butt Bends	1.30-1.35	1.25-1.31	1.13-1.27
Centers 12"	1.61-1.64	1.51-1.55	1.39-1.45
Centers 24"-28"	1.56-1.58	1.49-1.52	1.40-1.53
Centers 30"	1.47-1.52	1.41-1.47	1.31-1.43
Wide Sides	1.21-1.25	1.15-1.21	1.05-1.14
Narrow Sides	1.15-1.17	1.10-1.13	1.00-1.07

Premiums to be added: Ex Light, plus 5c-10c; Light, plus 7c; Heavy, minus 5c-10c; Ex Heavy, minus 5c.

Work Glove Moves

Buyer resistance to recently advanced prices reported in a number of quarters this week but some business was done at the new levels.

Work glove splits of LM weight remained unchanged, No. 1 grade at 17c, No. 2 grade at 16c and No. 3 grade at 15c while M weight alone held steady with No. 1 grade at 18c, No. 2 grade at 17c and No. 3 grade at 16c.

Bag, Case & Strap Same

Prices unchanged. Sellers maintain firm price views, complaining of high costs such as labor and shipping charges.

Case leather of 2-2½ ounce remains around 41-42c, 3-3½ ounce at 44-45c. Russet strap leather holds steady. Grade A of 4/5 ounce is quoted at 53c, 5/6 ounce at 55c, 6/7 ounce at 57c, 7/8 ounce at 59c, 8/9 ounce at 61c, 9/10 ounce at 64c and 10/11 ounce at 67c. Grade B quoted 3c less and Grade C at 5c less than above quoted prices with occasional movement reported. Glazed still commands 2c premium over russet finish and colors about 3c more.

Garment Perking Along

Good business in garment leather and trade advices say it looks like another big season lies ahead. There is considerable talk about cattle hide leather being utilized in greater quantities by the garment trade because of tight supplies of horsehide and sheepskin varieties.

Meanwhile, limited supplies and strong prices of horsehide garment leather have put many users out of the market.

Tight supplies of sheepskin garment leather have kept prices quite firm with suede in best call at 32-34c and down for volume lines, 36-38c for very good tannages and 40c and down for choice productions. Better productions of grain finish last reported sold at 33-34c and down while ordinary to fairly good tannages ranged 28-30c and down.

Gloves Mixed

Lack of confirmed orders causing deep concern amongst manufacturers of fine ladies' gloves.

As expected Irans, some domestics and low end Capes in the best demand. Irans bring 26c, 22c and 18c. A table run is offered at 24c with the very poor ones out. Domestic grains quoted from 26c to 30c for the smooth and 24c to 26c for the pigtex.

Fine Leathers

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• TOOLING LEATHER . . . Calf, kips and sides for leathercraft work.

HEBB LEATHER CO., INC. 112 BEACH STREET BOSTON, MASS.

Tanning Materials Steady

Some changes in raw tanning materials prices this week as noted below but market mostly steady. Demand is slow, buying sporadic. Extracts prices unchanged except for slight downward adjustment on East and South African Wattle. Tanning Oils maintained at firm levels.

Raw Tanning Materials

Divi Divi, Dom., 48% basis shp't, bag	$72.00
Wattle bark, ton "Fair Average"	$103.00
"Merchantable"	$100.00
Sumac, 28% leaf	$120.00
Ground	$110.00
Myrobalans, J. 1's Bombay	$46.00
Sorted	$48.50
Genuines	$50.00
Crushed 42-44%	$65.00
Valonia Cups, 30-32% guaranteed	$62.00
Valonia Beards, 40-42% guaranteed	$85.00
Mangrove Bark, 30% So. Am.	$58.00-59.00
Mangrove Bark, 38% E. African	$77.00

*Tanning Extracts**

Chestnut Extract, Liquid (basis 25% tannin), f.o.b. plant	
Tank cars	4.25
Barrels, c.l.	5.10
Barrels, l.c.l.	5.42
Chestnut Extract, Powdered (basis 60% tannin), f.o.b. plant	
Bags, c.l.	10.92
Bags, l.c.l.	11.65
Cutch, solid Borneo, 55% tannin	.08¼
Hemlock Extract, 25% tannin, tk. cars f.o.b. works	.0625
bbls. c.l.	.06¾
Oak bark extract, 25% tannin, lb. bbls. 6½-6¾, tks.	.06⅛
Quebracho Extract:	
Solid, ord., basis 63% tannin, c.l.	.11 31/64
Solid clar., basis 64% tannin, c.l.	.12 3/16
Wattle extract, solid, c.l., East African 60% tannin	10.10
Wattle extract, solid, c.l., South African 60% tannin	10.25
Powdered super spruce, bags, c.l. .05¼; l.c.l.	.05⅛
Spruce extract, tks., f.o.b. wks.	.01¾
Myrobalan extract, solid, 55% tannin	.07¼
Myrobalan extract, powdered, 60% tannin	.10
Valonia extract, powdered, 63% tannin	.09¾
Quebracho Extract, Powdered, Swedish spray dried, 76-78% tannin	.16¾
Wattle Extract, Powdered, Swedish, 73% tannin	.15¾
Powdered Spruce, spray dried, Swedish	.04
Myrobalan, Swedish, Powdered 68-70%	.11½
Oakwood, Swedish, solid, 60-62%	.11½
Oakwood, Swedish, powdered, 64-66%	.12
Larchbark, Swedish, solid, 54-56%	.11½
Larchbark, powdered, Swedish spray-dried, 58-60%	.12⅛

Tanners' Oils

Cod Oil, Nfld., loose basis, gal.	.90-.95
Cod, sulphonated, pure 25% moisture	.13-.13½
Cod, sulphonated, 25% added mineral	.12
Cod, sulphonated, 50% added mineral	.10½
Castor oil, No. 1 C.P. drs. l.c.l.	.28¾
Sulphonated castor oil, 75%	.26
Linseed oil, tks., f.o.b. Minn.	.149
drums	.164
Neatsfoot, 20° C.T.	.31
Neatsfoot, 30° C.T.	.29
Neatsfoot, prime drums, c.l.	.16
l.c.l.	.18
Neatsfoot, sulphonated, 75%	.16½-17⅛
Olive, denatured, drs. gal.	2.20
Waterless Moellon	.14
Artificial Moellon, 25% moisture	.13
Chamois Moellon, 25% moisture	.11-.12
Common degras	.18-.20
Neutral degras	.30-.31
Sulphonated Tallow, 75%	.11-.12
Sulphonated Tallow, 50%	.07-.08
Sponging compound	.13-.14
Split Oil	.11-.12
Sulphonated sperm, 25% moisture	.14-.15
Petroleum Oils, 200 seconds visc., tks., f.o.b.	.16
Petroleum Oils, 150 seconds visc., Tks., f.o.b.	.15
Petroleum Oils, 100 seconds Visc., tks., f.o.b.	.14

*Imported Extracts are plus duty.

SLACK DEMAND FORCES DECLINES IN HIDE AND SKIN PRICES

General Easing Reported As Annual Vacation Periods Approach

Packer Hides Ease

A let-up in demand not only from domestic tanners but also from export outlets caused prices of big packer hides to become top-heavy this week. Faced with continued heavy production, big four killers showed more willingness to sell and prices finally eased to lower levels in moderate trading involving a number of selections.

Sales of branded cows by two big packers late Tuesday totaling 15,600 were a feature at ½ to 1c lower prices depending upon production points. Northern and southwestern productions sold at a compromise price of 16½c while Denver hides were discounted a half cent, selling at 16c because of the long freight haul.

Earlier, trading in light native cows at lower prices set pattern for the market. One big packer sold 5,700 at 19c for Rivers and 19½c for Chicago production. Another sold 1,000 St. Paul production at 19½c. Late in the preceding week, a third big packer had sold 2,400 Albert Lea and Cedar Rapids light cows at 19½c. Previous general trading in light cows from regular points had been at 20c.

Some 3,600 lighter average southwestern light cows including a few ex. light native steers sold this week at a half cent decline or 26½c for Ft. Worth and Oklahoma City productions. Best price obtainable on light native steers 18c. One lot of 900 St. Paul ex. light native steers sold down to 21c.

Later, trading developed in heavy native steers on at least a full cent lower basis when a big packer sold 6,300 from all regular points such as river, Chicago and northern at 15c. Demand for heavy branded steers limited at 13½c for butts and 12½c for Colorados in opening negotiations and very few sold at those prices. Packers also found it difficult to arouse interest in heavy native cows offered at 19c for northern and 18c for river points. Supplies of the branded steers and heavy cows par-

HIDE FUTURES

COMMODITY EXCHANGE, INC., FUTURES MARKET

	Close June 18	Close June 11	High For Week	Low For Week	Net Change
July	18.08B	17.70B	17.85	17.60	+38
October	17.05T	17.10T	17.15	16.55	—05
January	16.11T	16.15B	16.15	15.67	—04
April	15.50B	15.55B	15.50	15.15	—05
July	15.17B	15.20B	15.19	14.90	—03
October	14.85B	14.82B	14.81	14.50	+03

Total Sales: 437 lots

HIDE AND SKIN QUOTATIONS

	Present	Week Ago	Month Ago	Year Ago
Heavy native steers	15	16 -16½	15 -15½	14 -14½
Light native steers	18	19	18½-19	17½-18
Ex. light native steers	21	22	21 -22	20
Heavy native cows	18 -19N	18 -19	17 -18½	15 -16
Light native cows	19 -19½	20	19½	16¼-17¼
Heavy Texas steers	14N	14½	14 -14½	12½
Butt branded steers	13½	14	13½-14	12½
Light Texas steers	16N	16½	16N	17
Ex. light Texas steers	19N	19½	20½-21N	18
Colorado steers	12½	13½	13 -13½	11½
Branded cows	16 -16½	17 -17½	17 -17½	14 -14½
Native Bulls	11½-12	12	12½-13	9 -9½
Branded Bulls	10½-11	11	11½-12	8 -8½
Packer calfskins	55 -65	55 -65	53½-65	32½-42½
Packer kipskins	35 -42	35 -42	34 -40	31 -36

NOTE: Price ceilings have now been completely ended by the government. All remaining goods and services have been removed from price controls. All regulations winding up controls require that applicable records be held until April 30, 1955.

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ticularly at river points have been accumulating.

Independents Off

Packers' Ass'n. sold 3,100 June Colorado steers at 12½c with a kosher allowance. This price considered a full cent down from previous general trading basis. Minnesota packer also sold 1,600 Austin light cows at 19c while Iowa packer sold 1,200 Sioux Falls branded cows at 16c. Packers' Ass'n., however, sold 1,200 branded cows at 16½c, due to freight advantage from Chicago.

Declines in the New York market also recorded. One packer sold 2,700 Colorados at 12½c, car of butts at 13½c and car of native steers at 16c. Another New York packer sold 1,000 butts at 13½c and Colorados at 12½c.

Small Packers Decline

Declines registered in big packer selections caused buyers of small packer hides to back away from the market. Some operators found it difficult to get firm bids of 15½c on 50-52 lb. avg. productions this week and some sellers were willing to do business on that basis. Other producers in a well sold up position were still asking up to 16½-17c but prices were considered "out of this world."

Even lighter hides eased to lower levels, small packer 44 lb. avg. selling down to 17c flat fob. including Texas production. Lighter Texas hides averaging around 40-41 lbs. reported obtainable around 20c flat fob. but no takers.

Country Hides Also

Easier undertone continued evident in this market. A few more locker-butcher hides, free of renderers, averaging 50-52 lbs. sold down to 12½c flat trimmed fob. shipping points. Mixed lots of similar average containing moderate to small percentages of renderers moved down to 12c on limited trading.

Some mixed hides offered at 12c fob. distant high freight points slow to sell. Renderer hides were considered nominal at 11½-12c in absence of new sales. Glue hides toppy at 11c and country bulls likewise at 8c, last paid for carload lots, fob.

Calf & Kip Affected

Declines in hide prices caused easier undertone in skins with buyers cautious about making new commitments. Some big packer Chicago and St. Paul heavy calf offered at 65c slow to sell. Last trading involved St. Louis, River and Wiscon-

sin heavy and light calf at 60-55c while Chicago-St. Paul lights brought 55c.

Some kip business confirmed late in the preceding week, two big packers selling about 4,800 from Kansas City at 42c. Northern overweights reported available at 37c, southern kip at 40c and southern overweights at 35c, but not much interest. Big packer regular slunks last sold at $2.30 and large hairless at 85c.

In small packer market, sellers had been holding good plump allweight calf at 45-50c but the outside figure looked toppy this week when some business was reported at the 45c mark. Small packer kip moved at 30c but more available on that basis with reports some productions could be obtained around 28c. Country skins also toppy with carload lots reported available at recently paid top prices of 24c for calf and 21c for kip.

Horsehides Still Hold

According to some sources, market for whole hides appeared barely steady. A few more good northern slaughterer hides bought at $11.00 trimmed fob. shipping point and market was considered nominally around $12.00 for untrimmed hides, fob., awaiting new developments.

Tanner interest described as limited although dealers producing cut stock from whole hides were making inquiries from time to time. Prices indicated by these buyers depended upon what could be realized on fronts and butts. Some northern fronts moved in a range of $8.25-8.50 and butts, 22″ and up, brought $4.00-4.25.

Sheep Pelts Slacken

Shearling production has hit its seasonal peak and is now starting to decline. While some less desirable lots of packer No. 1 shearlings sold steady at $2.00, some choice lots brought up to $2.40 which is a nickel over last week's top price.

Big packers selling No. 2 shearlings at $1.70-1.80 and No. 3s at $1.10-1.15 but more obtainable at the outside prices. A few more clips of big packer production sold steady at $2.85.

In the lamb pelt market, business confirmed at $3.00 for genuine springers with a few winter wool pelts cleaned up at $5.25 per cwt. liveweight basis. Reports that large midwestern packers sold June production spring lamb pelts up to $3.20-3.30 per cwt. liveweight basis for westerns. Some Texas springers have been selling with prices usually discounted 35-50c according to quality.

Full wool dry pelts sold at 29-30c fob., considered steady. Following sales of pickled skins at $15.50 per dozen for clear spring lambs, reports of summer quality skins bringing as high as $17.50 per dozen.

Dry Sheepskins Better

A little more activity in pulling skins, especially Australians, following recent declines. However, some sellers claim they cannot meet prices paid by pullers here and are still holding out for advances.

At last auctions, Melbourne reported 40,000 skins were sold, fine wools one to three pence, lambs three pence and strong wools two to five pence lower. At Sydney, 53,000 were offered; lambs one to three pence, sheepskins, 56s and up, 2 inches and up, four pence and all other descriptions two to five pence lower with strong cross-breds least affected.

Montevideo pulling skins held at 43½c per lb. c&f. and Argentines 41½-42c per lb. c&f., for ordinary assortments, which prices are too high for pullers here.

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H. C. Ross Burbank, Cal.
E. M. Wells Company San Francisco, Cal.

Hair sheep markets slow and nominal. Occasional sales reported but generally, buyers and sellers apart in their ideas. Some Brazil cabrettas sold at $11.00 per dozen fob, for regulars. Most shippers, however, asking $11.50 fob. for regulars and $15.50 fob. for specials. No late offerings of Nigerians or Addis-ababa butchers.

Shearlings continue slow and nominal. With the domestic market easing, it is more difficult to sell foreign skins, especially at the prices asked.

Pickled Skins Quiet

Cables from New Zealand report tenders of "Wallacetown" skins involving 3,000 dozen lambs and 2,000 dozen sheep sold at 110/7 shillings and 123 shillings, respectively. Otherwise, market ruled quiet as the season is about finished.

Domestic market firmer and summer lambs have sold at $17.50-18.00 per dozen, as to lots involved.

Reptiles Wanted

Fairly good demand for lizards and additional quantities of wet salted Bengal back cuts sold at around last trading levels. Sales of 10 inches up, averaging 11½ inches, 80/20, at 80½ to 81c with 83c now asked. Other assortments have been selling at proportionate figures.

Wet salted Agra back cuts held at 30c for 9 inches up, averaging 10 inches, 80/20 assortment with 27c bid. A combined lot of 8 inches up, averaging 9 inches with 9 inches up, averaging 10 inches, 80/20 assortment, held at 22c and 28c, respectively. Skins 10 inches up, averaging 11 inches, held at 40c.

Some quarters believe that they could sell Madras bark tanned whips, 4 inches up, averaging 4½ inches, 70/30 selection, at 52c and skins averaging 4¾ inches at 55c but most buyers' views are lower. They consider the market 50c and 53c, respectively. A combined lot of the above sizes, but 60/40 assortment, available at 54c and not taken.

Wet salted ramgodies, 10 inches up, averaging 13/14 inches, 70/30 assortment, held at 13½-14c without any interest. Alum tanned water snakes, 8 inches, offered at 8c.

Brazil market steady on lizards with further sales back cut tejus at 72c fob., but chameleons and giboias neglected. Ring lizards slow due to price differences. Buyers ideas for Javas and Malayan, 25 centimeters and up, averaging 30 centimeters, 50/50 assortment, at $1.40 with $1.45 and higher asked.

Deerskins Firmer

Brazil "jacks" firmed and business reported in Maranhaos at 65c and Paras-Manaos at 64c, basis manufacturers. Not many offers and some shippers now have higher views. New Zealands quiet. A few offerings at above 80c cif.

Pigskins Improve

Better demand for skins on spot and afloat and some fair sized sales including Manaos grey peccaries at $2.10-2.20, Para grey peccaries at $1.70-1.75 and blacks at $1.45-1.50 and Peruvian grey peccaries at $2.15, all basis manufacturers.

Buyers not showing much interest for shipment with offers of Manaos grey peccaries at $1.90 fob., basis importers, not taken. Wet salted capivaras sold at $2.80 fob., basis importers.

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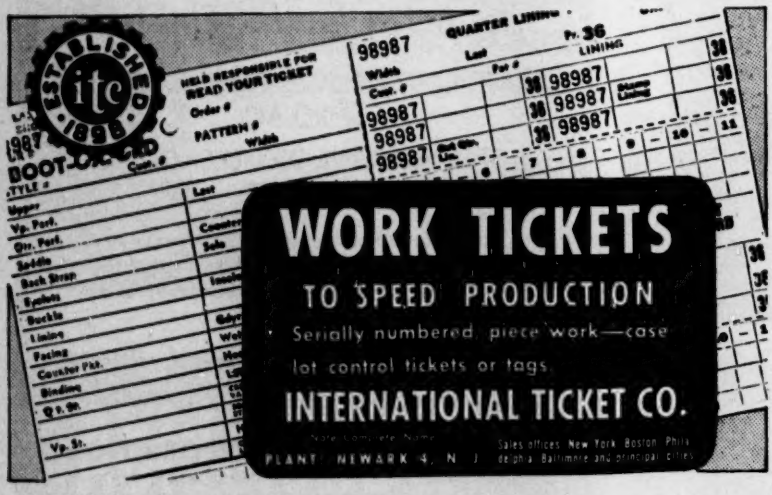

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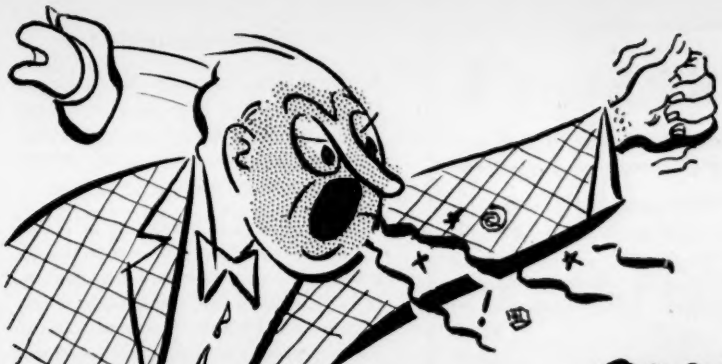

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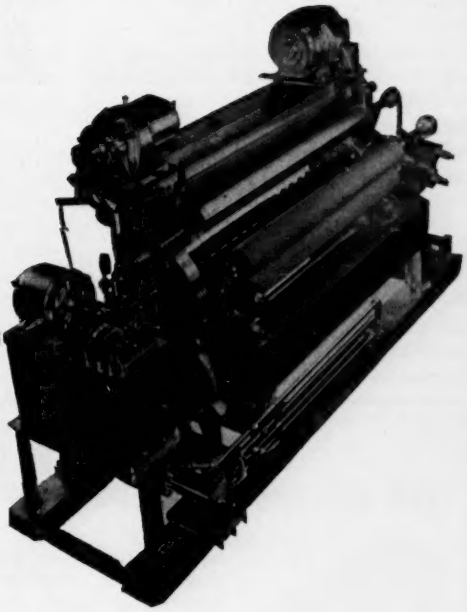

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NEWS QUICKS

About people and happenings coast to coast

California

• Business of **Solette Shoes,** Los Angeles footwear manufacturer, was purchased recently by Morrey Silver and N. R. Livingston, it is reported.

• Walter Braun, president of **Cobblers, Inc.,** Los Angeles women's shoe manufacturer, has announced that the company has completed arrangements with **C. J. Braun Pty, Ltd.** of Sidney, Australia, to manufacture "California Cobblers" for Australian distribution. Since the "down under" seasons are the direct opposite of those in the Northern hemisphere, the 1953 spring and summer line of Cobblers will be used as basis for the new arrangement. Plans call for initial production in Australia of 1,000 pairs per day.

Illinois

• The National Safety Council has just published the 1953-54 edition of the **National Directory of Safety Films.** The directory provides plant safety men with a comprehensive listing of 963 motion pictures and slidefilms for use in training personnel in occupational accident prevention. Copies are available for 75c apiece from the National Safety Council at 425 N. Michigan Ave., Chicago, Ill.

Maine

• Purchasers of physical assets of **Air-Tred Shoe Corp.,** Auburn shoe manufacturer, are George I. Shapiro, Joseph Rubin and Jack M. Cashman, principals of Gardiner Shoe Co., Inc., Gardiner. Sale included all machinery, equipment and buildings. The company's name has been changed to Air-Tred Shoe Co. Morris and Samuel Cohen, former president and treasurer of the Air Tred firm, will remain with the firm temporarily in an advisory capacity. Purchase price was not revealed. Air-Tred, which makes women's shoes, has been employing 250 to 300 workers.

Massachusetts

• **King-Size, Inc.,** Brockton manufacturer of large size shoes for men, has placed its advertising account with The Kleppner Co. of New York. Frank Vos is account executive.

• New officers and directors of **Daytimer Shoe Co.,** Worcester shoe wholesaler, are **Clarence N. Jacobson,** president; **Joel Glassman,** treasurer; and **Eleanor Glassman,** clerk. Elections were held after **Myer Saxe** reported he has sold his interests in Daytimer as well as Saxe-Glassman Shoe Corp. of Saco, Me. Saxe reports he will remain as president-treasurer of Kesslen Shoe Co. of Kennebunk, Me. Meantime, Daytimer will shortly move offices and warehouse to 450 Harrison Ave. in Boston, according to Jacobson, who has been executive vice president and general manager since April 1952. Joel Glassman continues as president of Saxe-Glassman.

• Receiver in bankruptcy matter of **Sherman Footwear Co.,** Marlboro shoe manufacturer, has been appointed under bond of $5,000, it is reported.

• **General Shoe Corp.** of Nashville, Tenn., is reported negotiating for purchase of the closed **Derman Shoe Co.** plant in Milford. Morgan Flaherty, president of the Milford Shoe Workers Association, said last week that progress was being made.

• Members of the Haverhill local of **United Shoe Workers of America, CIO,** voted on June 16 to ratify changes in the union's constitution as proposed at the recent CIO convention in Atlantic City.

• Equipment and machinery of **Benwill Shoe Co., Inc.,** 95 Rock St., Lowell, were sold at auction June 17 on the premises. Auctioneer was Frank E. Watson of Haverhill.

• Some 1,250 members of the **United Shoe Machinery Corp.** Quarter Century Club gathered at the club's 27th annual meeting Saturday, June 13, at the United Shoe Country Club in Beverly, Mass. A full day of golfing, bowling and other activities was topped off by a roast beef and lobster luncheon. Newly-elected club president is Lewis B. Walker, who succeeds Wayne S. Baldus. Nathan E. Johnson was elected vice president to succeed Walker. Re-elected were A. Lawrence Davis as treasurer and Joseph A. Kuebler as secretary.

• Several members of the **Boston Boot and Shoe Club** narrowly escaped

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injury when lightning struck the Wollaston Country Club Tuesday afternoon, June 9, during the club's Francis C. Donovan Memorial Golf Tournament. The bolt struck a large elm at the rear of the clubhouse, tore away part of a guard rail and plowed through a nearby woods.

• **Field and Flint Co.,** Brockton manufacturer of men's fine street and men's and women's golf shoes and Dr. Locke shoes for men, reports it will increase production almost 35 percent this fall as the result of record advance orders. The announcement climaxed the company's annual five-day sales and styling conference presided over by Clark L. Wilcox, executive vice president. The company is planning to launch its largest advertising campaign in its 96-year history. Some 12 new lines are being added to the Foot-Joy line, of which four are women's golf shoes on new lasts and eight men's standard street shoes.

• **Graton & Knight Co.,** Worcester tanner of industrial leathers, reports it has gone into a new line of juvenile sporting goods including top quality baseball gloves for the small fry. The company not only supports a team in the local Little League but is making the gloves for the boys' use.

Minnesota

• Martin C. Briggs, founder and owner of **M. C. Briggs Co.** of Minneapolis, manufacturer of work gloves, has sold the business to Norman McGrew and Brig. Gen. Elmer Salzman. Briggs will remain with the company for some time on a salaried basis.

Missouri

• A new five-year contract covering 125 warehouse employes of **Wohl Shoe Co.,** subsidiary of Brown Shoe Co., St. Louis, has been signed by officials of Local 688, AFL Teamsters Union, and the company. The pact is similar to that signed last Jan. with Brown Shoe Co. and provides a guaranteed annual wage, a cost-of-living escalator clause, and weekly increases ranging from $5 to $18.

• Report of auction sale of assets of **Foot Pleasure Shoe Co.,** Owensville shoe manufacturer, states $29,182. was realized on personal property before deductions for commissions, advertising and auctioneer's traveling expenses. Net proceeds before adjustment for taxes were $23,200.

• **Harold E. Tober,** president of Tober-Saifer Shoe Mfg. Co., announces

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that a new father and son representative team — the Alberts — have been organized. Harry Alberts and his son, Buddy, will travel Florida with the Orchid casual line and the new, high-fashion Cangemi Coed line.

• Friday, June 26, has been set as date for a special meeting of stockholders of **F. Burkart Mfg. Co.** of St. Louis to vote on an agreement to sell the company's assets to Textron, Inc. of Providence, R. I. The company operates women's shoe plants at Higginsville, Mo., and Portland, Me. Sale requires approval of 75 percent of common stockholders.

New Hampshire

• Construction has begun on a new shoe factory in **Hillsboro** which will employ some 200 local workers.

• Reports that **Bourque Shoe Co.** of Raymond will open a new plant in Haverhill have been denied by Normand P. Liberty, Bourque vice president. Liberty said the move had been considered but has been abandoned along with any plans to establish a new plant elsewhere. Bourque manufactures women's shoes.

• **Claremont Shoe Co.** of Claremont reports it is working on a good volume of orders. The company is seeking both experienced and inexperienced help, according to J. P. Klaubauf, president of Cosmo Shoe Corp., of New York, parent firm. Biggest demand is for California type sandals and crepe sole shoes.

• A non-contributory pension plan is included in an agreement signed by officials of **J. F. McElwain Co.,** Nashua shoe manufacturer, and the New Hampshire Shoe Workers' Union continuing the present contract until March 31, 1954. The pension plan, which becomes effective July 1, will give the average McElwain employe with 30 years or more of service a retirement income at the age of 65 which, coupled with social security benefits, will approximate one-half his normal earnings.

• A management and labor dispute over interpretation of when time study is legal led recently to a stoppage at the **Swift & Co.** tannery in Winchester. Approximately a dozen workers quit work in the soaking department when a time study was begun there by the management.

New York

• **D. & R. Handbag Co., Inc.,** New York ladies' handbag manufacturer, has been assigned to Herman Haberman of 225 West 34th St., it is reported.

• Involuntary petition in bankruptcy has been filed against **Chalmers Handbags, Inc.,** New York handbag manufacturer, it is reported. Receiver has been appointed under bond of $1,000. Sale of assets will be held shortly.

• **Bankart & Samuelson,** New York leather commission agent, is reported to have moved from 177 William St. to larger quarters at 5 Beekman St.

• Sufficient consents, both in number and amount of claims, to validate amended Chapter XI of **North Lebanon Mfg. Corp.,** New York footwear manufacturer, have been filed with referee, it is reported. Hearing of the plan, which proposes to pay creditors 100 percent, was held before referee on June 9. Liabilities are listed at $236,945 with assets at $273,913.

• Schedules in assignment case of **Thomas Cort, Ltd.,** show liabilities of $108,567 with assets of $23,711.

• **Calderazzo Trimming Co.** has been organized at 3050 West 21st St.,

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Brooklyn, to service the shoe trade. Principals are Sam and Charles Calderrazo, both formerly with Jaycee Footwear, Inc., of Hempstead, L. I.

● **Endicott-Johnson Shoe Corp.** has leased an abandoned Delaware, Lackawanna and Western Railroad depot located at Norwich for a five-year period, it is reported. Company spokesman says a stitching plant will be set up in the depot.

● **Capitol Leather Novelties Mfg. Co.** has been organized at 38 East 21st St., in New York City. Principals are Jacob Altman and others.

● **Dr. A. Posner Shoe Co.** reports it is expanding its line of boys' shoes and launching an extensive new promotion plan. Production of youths' and boys' sizes ranging from 12½ to 3 and 3½ to 7 will be increased 50 percent. Four new patterns have been added to the in-stock line bringing the total to 11. All lines will be introduced into boys' specialty shops.

Wisconsin

● Negotiations on a new contract are reported proceeding well at **B. D. Eisendrath Tanning Co.** of Racine where officials of the company and **Local 77, Amalgamated Meat Cutters and Butcher Workmen of North America** are meeting. The present contract expired May 1 but was extended to July 1 by mutual agreement. An unauthorized two-day strike by 125 workers was ended by union officials.

Canadian Notes

● Attempts to improve the tanning properties of ligninsulphonates were discussed by **Dr. A. G. Newcombe** of the Ontario Research Foundation, Toronto, at the annual convention of The Chemical Institute of Canada in Windsor, Ont.

● **Savage Shoes Ltd.,** Preston, Ont., whose two plants out of three have been closed by a strike started May 26, has applied to the Ontario Labor Relations Board to prosecute United Packinghouse Workers of America Union and certain employes charging violation of Ontario Labor Relations Act. Conviction on such charges carries heavy penalties for the union and individuals.

● **Wholesale sales** of footwear across the nation advanced 10.9% in dollar volume in April compared with the same month last year, with inventories increasing 9% in value during this period.

● **Imports of raw skins and hides** into Canada rose to $1,625,000 in first quarter of 1953 compared with $1,432,000 in 1952. Unmanufactured leather increased to $2,506,000 against $1,663,000, with manufactured leather reaching $2,710,000 against $1,603,000.

● Canadian **tanneries** showed an upward trend in both shipments and inventory values during March. Shipments increased to 72.8 in March against 69.8 in Feb., and 66.3 in March last year, based on 1947 being 100. Inventories increased slightly to 92.9 in March against 92.8 in Feb., though below the 106.5 in March last year.

● Leather footwear manufacturers' inventories declined to 161.3 in March against 165.5 in Feb., though below the 177.9 in March last year, based on 1947 being 100. Value of their shipments rising to 150.2 in March against 132.5 in Feb., but below the 161 in March a year ago.

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ALCA

(Concluded from Page 8)

Dr. H. Phillips, director of the British Leather Manufacturers Research Association; and Professor P. Chambard, director of the French Tanning School. Other leather chemists came from Spain, Canada, Australia, India and other foreign countries.

The talk that drew the highest attendance and interest was that given by Dr. Linus C. Pauling, regarded by many as the foremost chemical scientist of his time. Dr. Pauling spoke on Protein Structure, stated that as a result of past and current research he is conducting at the California Institute of Technology the complex structure of collagen protein may be revealed within the next year. This would comprise a discovery of major scientific importance to the leather industry as well as to other industries and sciences.

In fact, the study of collagen, protein fiber which is the basic property of leather, received a whole afternoon's treatment, with some four additional papers delivered on the subject.

Another topic frequently discussed was inroads made by synthetic or non-leather materials into leather's traditional markets. However, while much stress was given to research and leather improvement as a solution to combat the competition, little attention was given to the vital subject of leather merchandising.

ALCA Sidelights

- President Harold G. Turley announced that over the past year 85 new members had joined the American Leather Chemists Association.

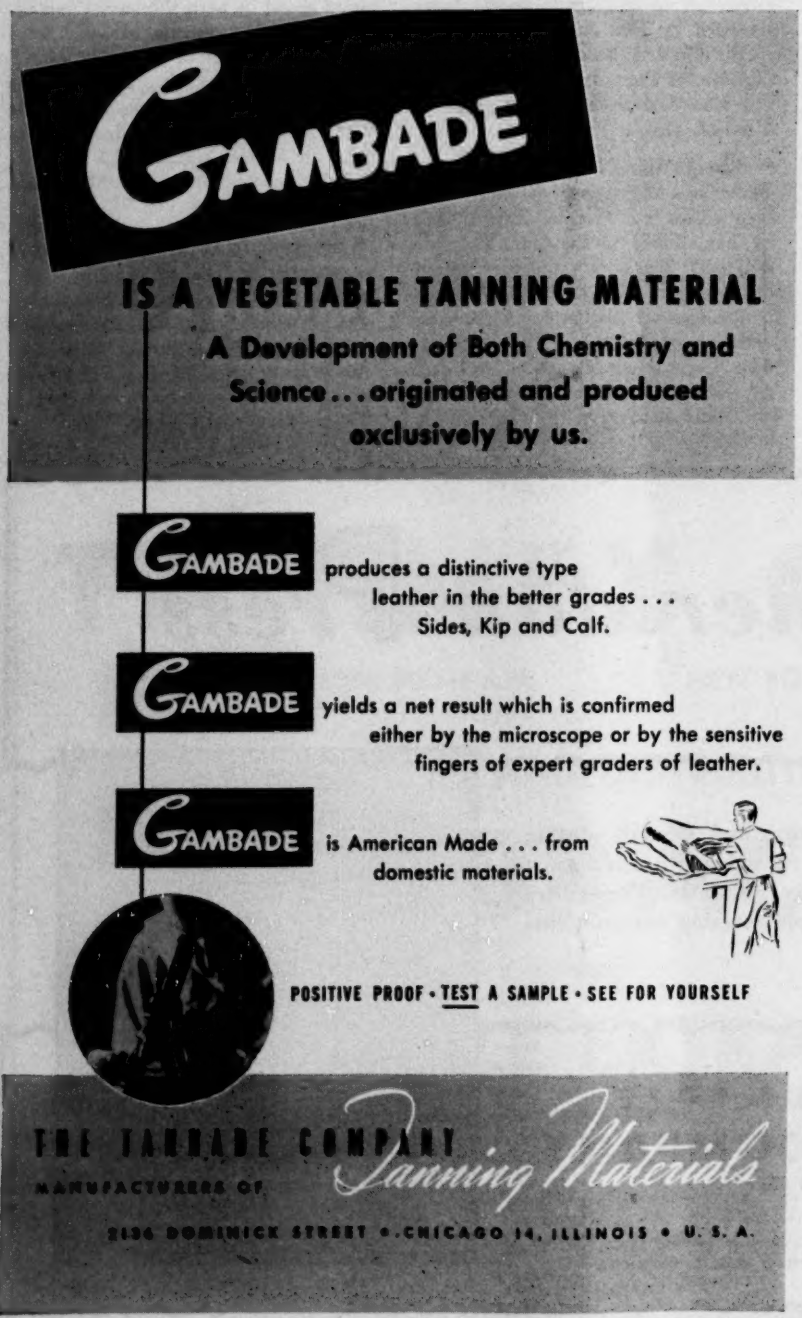
- The Netherland Plaza Hotel, site of the convention, had promised to have over 600 air-conditioned rooms. Fewer than 200 were available, due to an unexpected strike—which didn't help the guests in the 92-degree heat.

- The guest speakers from foreign countries (England, France, Sweden) were brought here by means of funds raised in the U. S. tanning industry via the ALCA.

- Among the conspicuous missing was Al Schiller of Nopco Chemical Co. This was one of the rare instances where Al, an ALCA member since 1920, was unable to get to the annual meeting. Schiller, who holds the only "Doctor of Conventions" degree ever awarded by the ALCA (the "degree" was formerly presented at the 1946 convention) was personally responsible for much of the expansion of the Association in years past. During his term in office he also put the ALCA *Journal* on a paying basis. Schiller in 1939 received the Alsop award for his outstanding work with the ALCA. It was extremely regretful that Schiller was unable to participate at the golden anniversary of an organization in which he has for so many years played a major role in helping it attain present status.

- The 1954 ALCA convention site is expected to be Bedford Springs, Pa. This resort hotel has been modernized and enlarged since the leather chemists last held their convention there.

- ALCA president H. G. Turley has appointed seven U. S. delegates to attend the forthcoming Conference of the International Union of Leather Chemists Societies, to be held in Barcelona, Spain. The men are: E. S. Flinn, Fred O'Flaherty, Ira D. Clark, M. Maeser, C. G. Telander, A. N. Kay, and H. G. Turley.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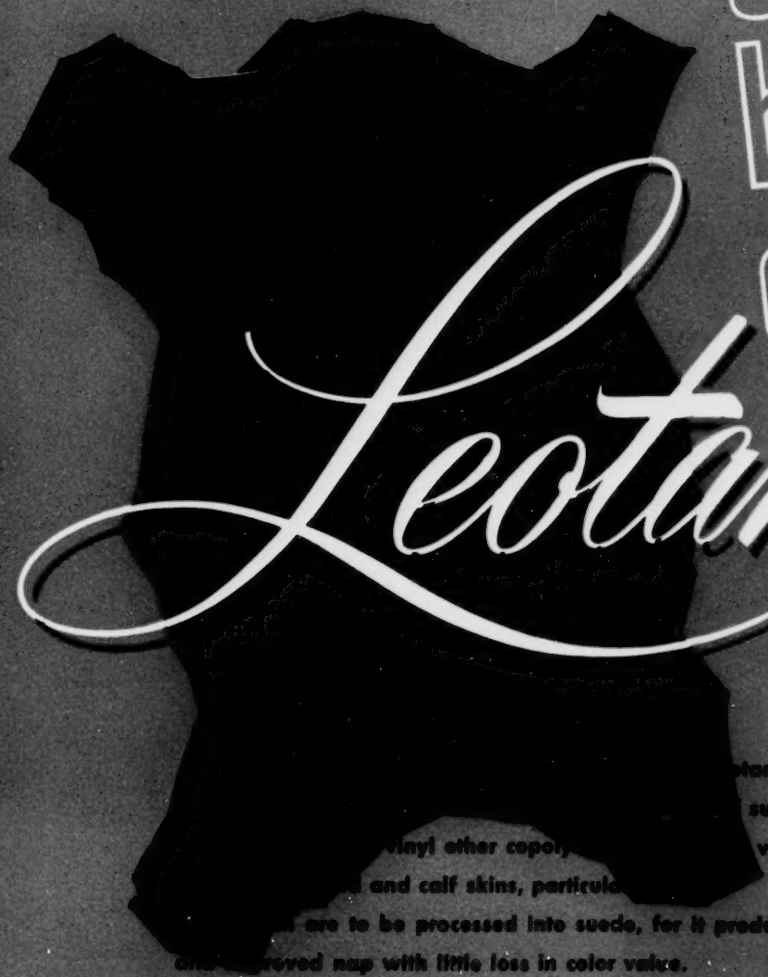

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ANTARA

(Continued from Page 11)

using the same old drums. This goes, too, for vats and pits. Lime reels were being used as long ago as 1875. Though they were cranked by hand, the method is the same today, only the drive is different

How about the rocker yards in the sole leather tannery? There's nothing new about rockers; they've been in use for 80 years.

I know of no startling new method of trimming or cropping in the sole leather tannery; nor, for that matter, of trimming side leather. Nothing has taken the place of knives and shears operated by hand. The exception to this is the fact that there *are* good modern machines for trimming finished calfskins and kid or goatskins.

Analysis Of Machines

The first fleshing machine of the cylinder type was invented in *1850.* The present machines go back to the principle of the first machine but incorporate gripping rollers, and spiral blades in the cylinders. The present multiple-table unhairing machine was patented in 1904 and is a development of the machine invented in 1850.

No continuous-feed machine for fleshing or unhairing has ever come on the market. We are working on such a machine at our research laboratories. The machine may be close to the stage where it is ready for adoption for commercial use. These machines will result in a really tremendous saving of labor in the beamhouse.

The first mechanical wringer was simply a brass roller weighted down and rolled over the hide or skin by hand. This was in general use until about 1875. The present type of wringer utilizes felt-covered rolls and is, like the fleshing and unhairing machines, a two-pass machine. Many sole leather tanners have converted these to continuous-feed machines. There is a new continuous-feed wringer for upper leather on the market. At this time there are not many of them in use. If this new design is completely successful, it represents a very important step forward.

The first automatic setting machine was invented in 1876. This did not bear much resemblance to the setting or putting out machines in use today. They represent another example of the two-pass machine. Sooner or later this operation, too, is going to be performed in a continuous-feed machine. If our experimental continuous-feed unhairing and fleshing machines turn out to be the success we hope, we believe that it may be feasible to adapt this principle to setting and putting out.

The "Union Splitting Machine" was perfected in 1856. In this type the hide is drawn between a roller and a fixed knife. Some of these machines are still in use in calfskin tanneries for head-splitting or cheeking. A very good modern machine has been introduced into this country from Germany, is replacing the old Union splitters in calfskin tanneries. We put some effort into designing a high-speed machine for cheeking calfskins. Since the potential market in the calfskin industry would amount to about thirty machines, we decided to discontinue this project.

The horizontal band-knife splitter which is in general use in side upper leather tanneries was invented in 1883. It's a good continuous-feed machine, which will lend itself to high production and maybe to conveyor systems some day.

When it comes to drying upper leather, real progress has been made in the past 50 years. Toggling is a development of a method first patented in 1904. Pasting has come into gen-

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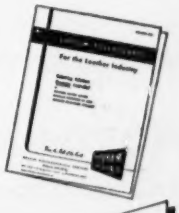
- And Hooker Sodium Sulfhydrate saves you 40% on chemical handling and storage—because you need only 60% as much to obtain the same sulfidity as with double strength Sodium Sulfide.

Hooker Bulletin 500 tells more about Sulfhydrate Unhairing Solutions. It suggests procedures for calfskins, hides for sole leathers, for side and upper leathers, and for specialties. A copy will be sent you free when requested on your company letterhead.



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eral use. The modern pasting system is perhaps the most noteworthy development in the way of tannery machinery during this century. Experiments are still being carried on, aimed at faster drying times and elimination of the nuisance and expense of paste. There will be improvements made in this direction. Many of you are familiar with our freeze-drying experiments. We stopped work on this project two years ago because the idea was not economically practical. We did produce some beautiful leather by this method, leather which required no staking, and without the use of paste.

One new, modern machine is the skin washer. This is a continuous-feed machine designed to remove the paste from sides or skins, and also serves to wet them back for subsequent operations.

The old belly-stakers and clamp-stakers are still in general use. This primitive machine which works on only a small strip of the leather at a time is slow, expensive to operate. Many attempts have been made to introduce a full-width machine. None of them has yet proved successful to the point where it can be used on a great variety of leathers.

The conventional pendulum-type sole leather rolling machine is an antiquated contraption. Various attempts have been made to design a full-width, continuous-feed machine. We have such a machine, still in the experimental stage, which has been undergoing tannery trials for over two years. This machine will wet roll or dry roll crops or bends, with a 3-to-1 production advantage over the old pendulums. But due to the very small market for such a machine, which means a high manufacturing cost, this is an expensive machine.

Upper Leather Machines

For the upper leather buffing operation there is a modern full-width machine. This machine also is continuous-feed. The machine is set up to return the completely buffed leather to the operator. The modern full-width machine is so accurate that it is possible to buff the printing off a piece of newspaper without destroying the paper. That's a good machine.

Not too long ago almost all upper leather was dusted in the old box brusher, a slow and laborious operation. Then, along came continuous-feed, high-speed brushing machines, and the latest development is our Air Blast Dust Removal Machine, Model A. This is a continuous-feed machine which utilizes compressed air rather than brushes to clean the leather. With a feed speed of 200 feet a minute, this is the highest production machine in general use in tanneries today. There are about 90 of them in use, which gives a good indication of just how hungry the tanners are for really new machines, considering that we adopted this machine only four years ago.

We have in the development stage a stacking machine which will take the leather from this dusting machine and stack it on horses. This stacker can be used also behind a skin washer, or a spray seasoning conveyor, or any other continuous-feed machine, as more come into use.

Seasoning machines are a development of the 20th Century, and represent real progress towards conveyorization. Spray seasoning with conveyors running through drying tunnels represents a further step.

The boarding machine, while fairly modern in concept, was originally patented in 1873, improved in 1885. This is a full-width machine, contin-

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uous in its feed, bringing the work back to the operator, which is necessary for a 2-way or a 3-way boarding. It is a good machine production-wise, but hardly new.

The glazing jack is certainly a primitive machine, but the effect which it produces on the leather apparently can be obtained by no other means. A way will be found some day to get the desired effect by means of a full-width, continuous-feed machine.

The heavy presses in use for plating and embossing may represent good machine design, but it is certainly a slow operation. A way will be found to speed it up, probably by means of continuous-feed machines.

New Developments Needed

The measuring machine in use is essentially the same as one patented in 1883. It is a modern machine in that it embodies the continuous-feed principle. However, it is not as accurate, nor as fast, as the pinwheel machine which is in general use in Europe, and it requires more maintenance. Our American machine has a tendency to over-measure. If any one tanner changed to the pinwheel machine, he would have to up the selling price of his leather by perhaps two percent. So, they all stick to the same old machine.

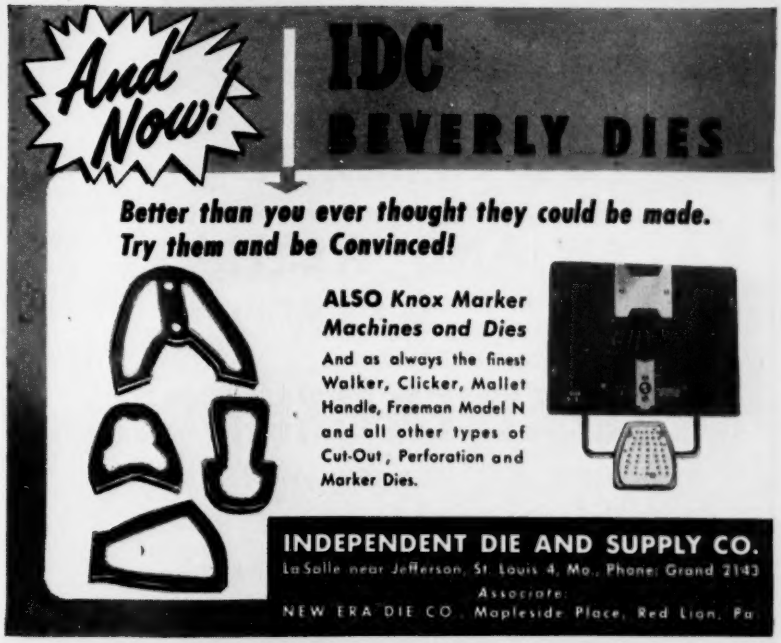
We have done some work on a device to stamp the measurement on the leather automatically after it has passed through the machine. This might be used in conjunction with our stacker to dispense with the need for the man taking the leather away from the measuring machine.

We shall see bundling machines in operation one day in the shipping room, to do away with the hand labor involved in wrapping the leather with paper and string.

The number of real innovations since 1900 has been disappointing. To enumerate the really new machine concepts, they are: Trimming Machines for kid and calfskins; a band-knife cheeking machine; the pasting system of drying, and the skin-washer which goes hand-in-hand with it; the full-width buffing machine; dust removal by air blast, and seasoning machines with conveyors.

The leather chemists are way ahead of the leather machinery manufacturers. I hope that the next 50 years will see us starting to catch up. Unless, that is, during that time you make discoveries which will make all tanning machinery unnecessary.

— END —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It was just a little cow-play. Sis bit me and I kicked her and then I told her about Salem Oil & Grease Company's 7 ways to make better leathers with Tiger Brand Oils & Greases.

LEATHER COLORING

(Continued from Page 15)

mechanical change was made: top buffing both on blacks and colors. With this extra color buffing, it became necessary to color and penetrate the skins to a sufficient depth so that particularly in the case of blacks we would have a good body of color. In addition to suede leathers made with the diazo type of dyestuffs we also used selected dyes from the acid, direct and basic groups.

Suede kid came into great prominence with the introduction of the top buffing method. Methods of coloring suede calf and suede kid are quite similar with one exception: it is much more difficult to penetrate the grain layer of the kidskin. This has been overcome with the use of detergents or wetting back agents and by increasing the percentage of alkali in the wetting back and coloring operations.

Chrome Splits

One class of leather which has been developed to the greatest extent in recent years is chrome split leathers for suede and non-slip linings for both women's and men's shoes in the medium and lower price ranges.

The early production of split leathers was mainly gussets — work shoe uppers and yellow glove. Splits that were used earlier in the production of gussets and yellow glove were not sorted for selection. Today only the poorer types would be used for this purpose. Today a great deal of care is taken in the sorting of splits, the better grades being used for the manufacture of suedes and non-slip lining leathers.

The preparation for the coloring of splits is similar to calf and kid suede. We make the selection of dyestuffs from the same groups — namely, the acid, direct, chrome and basic. The coloring of this class of leather, particularly the heavier shades, calls for a considerable percentage of dyestuffs. Shades produced without the use of basic dyes seem to give the best results.

In the coloring of black suede splits the use of basic dyes in the coloring formula give greater depth to the black. Black is also produced in some plants by the use of the diazotized and developed method.

Both nap and color in a black are aided with the use of a singeing machine. A gas flame is adjusted so as to burn the longer fibres and produce a closer nap. If proper care is exercised excellent results are obtained.

What properties are imparted to the leather by the use of syntans? First, when syntans have been applied to chrome-tanned stock a considerable bleaching has occurred. Utilizing this effect, and in conjunction with white pigments, it is possible to produce satisfactory white tannages.

Second, when acid and direct dyestuffs are applied to the syntan-treated chrome leathers the shades obtained are much lighter and increased penetration of color is apparent. There is a greater uniformity of shade over the entire area. It is now possible with small percentages of dyestuffs in conjunction with syntans to produce the whole range of pastel shades.

Third, when chrome-tanned stock is treated with syntans an excellent mordant has been produced for the application of basic dyestuffs. Such leather exhausts basic dyestuffs to a greater extent, increases brilliance and clarity. Syntans have a great effect on the solubility of extracts and have considerable effect on extract tannages.

During the past half century considerable progress has been made in the development of chrome-tanned sheepskins, particularly for garment and military types of leathers. Earlier coloring of sheep was done mainly on vegetable tannages with a relatively small percentage tanned in chrome. Colored linings were produced for the shoe trade, skivers for bookbinding, and there also was a fair amount of suede. Black and browns predominated with a certain amount of natural extract colors and also alum whites.

Today there is a considerable demand for a leather which must be mellow, soft with a silky feel, finished either on the grain or flesh side as desired and has excellent draping qualities. Sheepskin has all these properties.

Today's Demands

Today we produce all the pastel shades and full colors with the properly selected dyestuffs with the assistance of the syntans. Years ago there was demand for relatively fewer colors. Today, with the demand for such an extreme range of shades on all kinds of leathers, it is necessary for the dyestuffs concerns to employ a considerable number of experienced technicians. These men with their knowledge of dyestuffs in cooperation with the tanners can submit approximate formulae for any desired shade.

— END —

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highly purified sodium lignosulfonate tanning agent used in conjunction with chrome or vegetable tans to produce leathers of excellent quality. It has an effective tannin purity of over 70% and provides a 25 to 30 degree of tannage. Savings up to 40% on the cost of vegetable tanning materials are obtainable with Maratan.

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Maratan is used to supply up to a 25 or 30 degree of tannage. Higher tannages are obtained by using vegetable tans in conjunction with Maratan. The suggested percentages of tannin to be supplied by Maratan and by vegetable tans for various types of leather are given below (based on supplying a 25 degree of tannage with Maratan):

Type of Leather	Degree Tannage Desired	Percent Tannin To Supply With Maratan	Percent Tannin To Supply With Vegetable Tan
Fat-liquored Chrome Retan	10 to 25	70 to 100	0 to 30
Stuffed Chrome Retan	36 to 50	50 to 70	30 to 50
Flexible Vegetable Splits	50	50	50
Sole	80	30	70

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CHEMICAL DIVISION
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FAT LIQUOR L-90B
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White Tan In Combination With Chrome
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LEATHER FINISHING

(Continued from Page 22)

salts would react with the fatliquor to make insoluble metallic soaps which could not be easily washed off, and the finishes would not penetrate.

A major advance in finishing came with the solution of the fatliquoring problem. When this problem was licked, they still had to contend with the sulphur spew. It bleached the colors and caused a dry haze in blotches over the skins. Shoe men became so accustomed to seeing the "bloom" that when customers complained they were told that it was impossible to manufacture fine leather without it.

As the technology of chrome tanning advanced, so did that of finishing. Glazed kid and calf were no longer made only in black and a few browns, but they were being made in many bright colors with German aniline dyes. The only drawback was that soft skins were light, and hard grain skins dark. Often a drum of finished skins when sorted for color would yield a dozen shades. The imperfections were obvious. The cutting value was very low. Glazed leather and corrected sides had to be finished a new way to reduce the number of grades. This was accomplished by the use of embossing and smooth plating machines and concentrating on the development of pigment finishes.

Made Own Finishes

The tanners bought their colors ground in water (distemper) from the paint industry and made their own finishes. These finishes frequently dusted off, settled out hard on the bottom of the container, became thick, and decomposed.

About 1910 the first leather pigment finish manufacturers started in business. These companies spent their full time on making finishes which they sold in carload lots.

During this era, nitrocellulose, oil, paint and varnish manufacturers were also experiencing a boom in the demand for their products. They made chrome colors, iron blues, paratoners, special oxides of iron, lithopone, titanium dioxide, lithol toners, toners made by precipitating basic dyes with quebracho, and some special colors with tannic acid or other selected metallic salts. The best light, heat, and alkali resistant colors were made from the late Thirties to Forties. They were the cadmiums, in-

danthrenes, phthalocyanines, special tungstated and molybdated pigments.

In about 1920 casein was featured as the major binder in leather finishes and has played an important part ever since.

But not until the first World War was the use of solvent type coatings really applied to leather in large quantities. Nitrated gun cotton was war surplus and it was a drug on the market. Tanners and textile men took this material, called "spaghetti," dissolved it in acetone, amyl acetate (banana oil), and wood alcohol. The thinner was benzene or some refined petroleum. The plasticizers were blown rape seed, blown castor, raw castor oil, and tricrysyl phosphate. Colors were ground in oil and then added to the clear lacquers.

New Coatings Durable

These coatings served their purpose but did not age well. Today we have nitrocellulose coatings which will last almost as long as the material to which they are applied. Other solvent type coatings were developed in this order: 1920, Bakelite; 1927, Vinylite; 1930, Alkyds; 1935, Polystyrene and Urea Formaldehyde; 1937, Methacrylics and Acrylics and Nylon.

About 1940, lacquers which were emulsified with water were first being used to coat leathers. They could be diluted with water instead of thinner, and were less hazardous. Water, dyes, binders, and specially dispersed pigments could be mixed with them. The material gave good levelness, was water resistant, and flexible. The emulsions found their place in the glove, coat, garment and novelty field. Later they were used to make aniline side leather. Although these materials have been made for over 15 years, there is still much to be learned to make them absolutely foolproof.

New Type Resin

In 1936 a new type of resin in the form of a latex or milk-like material was introduced to the leather industries. It was the Vinyl group: Polyvinyl Acetate, Polyvinyl Chloride, Acrylic and Methacrylic Polymers and copolymers polymerized in emulsion or pearl form. These laticies were, after slight adjustment, mixed with the regular finishes and produced tough, water resistant, uniform, and flexible coatings. They also made it possible to use a water-base finish for a lacquer top coat.

The synthetic rubber production program of World War II taught our higher polymer chemist more in five years than was known by anyone before. The leather finish manufacturers who were on their toes also learned about polymers and applied the knowledge to their business.

Basis of Success

The success of the leather industry will be based largely on the proper utilization of the available finishes. High-grade leather with few imperfections should be coated with a minimum amount of finish in order to retain the natural beauty and texture of the leather. In low-grade leather, where it is necessary to use large quantities of finish to construct a new grain, the proper use and application of synthetic resin finishes is imperative.

If the tanner takes advantage of the rapid development of synthetic resins, which can be used to impregnate as well as coat, specialty leathers can be produced which will have improved resistance to abrasion, chemicals, solvents, etc., and will definitely have great advantages.

— END —

They are YOUR Research Laboratories Too . . . .

CREATORS OF BETTER FINISHES FOR SPECIFIC LEATHERS

BB CHEMICAL CO. CAMBRIDGE AND SOUTH MIDDLETON, MASSACHUSETTS

COLLAGEN RESEARCH

(Continued from Page 26)

ments split off from the protein chains by breaking them down only partially, and the eventual putting of these pieces together much as the parts of a jig-saw puzzle are put back together to re-form the original picture.

These methods have, within the past year, yielded a complete picture of the sequence of amino acids in the molecule of the protein insulin. Insulin is a much simpler protein than collagen. Some results have already been obtained in this way for the latter. We may expect an eventual complete solution of the problem.

Chain Research

There has also been an attempt to determine what the shapes of the peptide chains are, and how the individual chains are put together to make up the fiber. A given bead chain can assume any of a countless number of shapes; it can, for instance, be rolled tightly up into a ball or stretched out straight to its maximum length, or coiled or crumpled into any of a large number of intermediate positions. The peptide chains of a protein have the same ability, although to a considerably smaller degree. Protein chemists have known for many years that the shapes assumed by these molecules in a given protein has a very large influence on the properties of that protein.

Fibers X-Rayed

The bio-physicist or X-ray structure analyst, on the other hand, shoots a very fine X-ray beam into the interior of a crystal or a fiber, and records the reflections of this beam from the various molecular planes of its internal structure. Complex mathematical methods permit him to deduce the details of the structural arrangement from the pattern of reflections thus produced. This method gives a detailed and precise picture of the internal structure of simple crystals, but the difficulties increase tremendously when the material examined is as complex as a protein. For this reason it has taken approximately a quarter of a century to arrive at our present position, where models of the detailed shapes of the chains and the manner in which the chains are packed together to form a fiber have been set up. Each succeeding improvement brings us closer to the truth. It is the exact nature of the coiling of the individual chains that is still in doubt.

Microscope Aids

By use of the electron microscope it was discovered a few years ago that the individual fine fibrils of which the fiber bundles are built up are stretchable, although a fiber bundle large enough to handle will stretch only a few percent before it breaks. This finding has important consequences for collagen structural theory. The electron microscope has also, within the past two years, made possible the finding that the collagen fiber can be taken apart and put together again in various ways to give new and hitherto unrecognized fibrous forms of collagen. The extension of this type of work promises to give a great deal of important information about the way the collagen fiber is built up.

The practical man in the leather industry may well ask what meaning all this work has for him. Fuller knowledge of any raw material is bound eventually to have an important bearing on improvements in processes and products. There are,

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Fingernail, that is . . .

To make your grains and splits scuff-resistant just try our new no-lacquer, waterproof finish. Especially good on shark-tip splits for children's shoes, it is also suitable for novelties needing a hard, waterproof finish.

And then we have a one-coat, high-gloss finish and binder combined that is made especially for garment and softie type leathers. Now being used by makers of sheep, cowhide and horsehide garment leathers with complete satisfaction.

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however, several aspects of this type of research that do permit more specific answers. One is concerned with the relation of collagen structure to the way in which tanning agents produce their effects on skin.

Effect of Tanning

We know that each collagen fiber in a piece of skin consists of a large number of such chains. What happens to this structure on tanning? This is the question the leather chemist would like most to have answered. We cannot yet answer it fully because we lack the necessary information about the detailed structure of collagen. Tanning consists in tying the chains together in various ways, much as if we were to lay out a bundle of our bead strings on a table and then make the bundle more permanent by tying it together at several places with string. The situation can be made closer to that prevailing in tanning if we, for some reason, were only able to tie the chains together at places where red beads from different chains came quite close to each other, or where a blue bead from one chain came close to a yellow bead from another.

In other words, tanning agents only stabilize the fiber by combining with the collagen at certain points in the chains. We are gradually becoming aware of some of these special conditions. It has become clear over the past few years, for instance, that chrome combines with collagen in an entirely different manner than do the vegetable tannins, and that the properties of the resulting leather are, therefore, quite different. The places where the tanning agent combines with the collagen and the type of bond by which it ties the chains together are important factors in determining leather properties.

Desirable Objectives

The ability to control the properties of leather precisely, to make new tanning agents to fulfill strict requirements, and to improve and make more efficient the tanning process itself are desirable objectives all of which await a more complete knowledge of collagen structure for their fullest realization.

— END —

CHROME TANNING

(Continued from Page 16)

and the modern process of wheel stuffing has almost completely superseded the old-fashioned system of hand-stuffing in the production of harness leather.

"The finishing of calfskins on the grain side has been so successful that the old system of currying the skins and finishing them with wax on the flesh side has been almost entirely discontinued.

"No leather introduced by the American tanners during the last few years has given more satisfaction as far as looks and wearing qualities are concerned as chrome tanned calf skins."

Fifty years ago practically all of us controlled our process by using our tongues as our pH meter. We tasted the skins and liquors at practically every point. We used the boil test by observing when and how the leather shrank. The process required from 48 to 120 hours for calf skins. Today we do it in 4 to 20 hours.

We used to hang our leather in lofts for the first drying, then process it by conditioning, staking, and nailing it on frames for final drying before the finishing operations. To-

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day a very large percentage is pasted with the grain against a glass or porcelain - coated plate, passing through a continuous dryer and coming out dry in three to four hours, then stripped from the plate, washed clean of paste ready for the finishing operations. Other leathers which formerly were nailed on boards to dry are now toggled onto frames and passed through a dryer requiring 30-40 minutes instead of 8-10 hours.

There have also been great developments in the finishing of upper leathers. By means of pigments, dye lakes, and improvements in coating solutions a range and uniformity of colors are obtained undreamed of years ago. A tanner's production formerly consisted of 80 percent black and 20 percent brown, then tan came in followed by gray; but still well over 65 percent was black. Now look at the range of shades today.

Coating solutions that were formerly applied by hand are now sprayed or machine-applied and dried within minutes instead of overnight. We have developed synthetic resin coatings so that all except the higher grade upper leathers are now no longer glazed but are only ironed and smooth plated. Looking into the future, we will produce leathers that will wear better and be more beautiful than we dream of today as the result of basic and practical research in the field of tanning, dyeing and finishing.

— END —

CLASSIFIED ADVERTISING

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WANTED for Pennsylvania, Maryland and Virginia territory, to represent us on our fine line of Nylon Mesh and other shoe fabrics for men's, women's and children's footwear. Please submit detailed information on previous experience and lines now being carried. Box S-8, c/o Leather and Shoes, 10 High St., Boston 10, Mass.

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CONTRACT TANNING WANTED, medium sized tannery located in Midwest. Want contract work on vegetable leather, steady operation.

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Rates

Space in this department for display advertisements is $5.00 per inch for each insertion except in the "Situations Wanted" column, where space costs $2.00 per inch for each insertion.

Undisplayed advertisements cost $2.50 per inch for each insertion under "Help Wanted" and "Special Notices" and $1.00 per inch for each insertion under "Situations Wanted."

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Advertisements with box numbers are strictly confidential and no information concerning them will be disclosed by the publisher.

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Situations Wanted

Tanner

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AMERICAN CANCER SOCIETY

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*T. M. Reg. U. S. Pat. Off.

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